IPD Viewer Software

Reference manual

AGFA

© Agfa-Gevaert N.V. 2000.

No parts of this document may be reproduced, copied, adapted or transmitted in any form or by any means without the written permission of Agfa-Gevaert N.V.

Agfa-Gevaert N.V. makes no warranties or representation, expressed or implied, with respect to the accuracy, completeness or usefulness of the information contained in this document and specifically disclaims warranties of suitability for any particular purpose. Agfa-Gevaert N.V. shall under no circumstances be liable for any damage arising from the use or inability to use any information, apparatus, method or process disclosed in this document.

Agfa-Gevaert N.V. reserves the right to make changes to this document without prior notice.

Agfa-Gevaert N.V., Septestraat 27, B-2640 Mortsel, Belgium.

Windows® and Windows® NT are trademarks of Microsoft Corporation.

Jaz® is a trademark of iomega.

IPD Viewer Software is a trademark of Agfa-Gevaert N.V., Belgium.

Agfa and Agfa-Rhombus are trademarks of Agfa-Gevaert AG, Germany.

Table of contents

Chapter 1: Introducing the IPD Viewer Software 13

IPD Viewer Software features 14
Modes of the IPD Viewer Software 16
Selector mode 16
Viewer mode 16
The user interface 17
Selector mode 17
Viewer mode 20
Starting the IPD Viewer Software 24
Using the online Help 25
Switching to the ID Software 26
Switching to the QC Viewer Software 27
Switching between Selector mode and Viewer mode 28
Quitting the IPD Viewer Software 30

Chapter 2: Selecting studies (Selector mode) 31

Selecting an on-screen presentation 33
Showing/hiding the search pane 34
Showing/hiding the favorites pane 35
Showing/hiding the list view pane 36
Showing/hiding the thumbnail pane 37
Showing/hiding related prior studies 40
Searching the local database 41
Defining a search 42
Defining a favorite 44
Defining a group of favorites 48
Searching remote databases 52
Selecting a study or an image 53
Selecting a study 54
Selecting an image 56
Protecting a study 57
Changing the order of images in a study 59
Transferring an image to another study 60
Deleting a study or an image 61
Consulting study information 62
Marking a study as dictated 63
Printing a study or an image 64
Print using the default layout (Quick Print) 64
Print using a custom layout (Print Composer) 65

Transmitting a study or an image 67
Re-routing print or transmit jobs 68
Archiving and retrieving a study 69
Importing a study 70
Exporting a study 76
Exporting the study or image data to a Rislink file 83

Chapter 3: Viewing studies (Viewer mode) 85

Viewing a study for on-screen diagnosis 87
Selecting an on-screen presentation 89
Showing/hiding the study overview pane 90
Showing/hiding the image demographic data 91
Showing/hiding the dose monitoring bar 92
Selecting a format for the image pane 93
Viewing a study in full screen mode 95
Navigating in Viewer mode 96
Showing/hiding the navigation bar 97
Showing/hiding related prior studies in the worklist 98
Navigating through selected studies 99
Navigating through retrieved studies 105
Navigating through favorite studies 107
Protecting a study 109
Processing an image 110
Displaying the histogram and the sensitometric curve 112
Changing the global contrast and intensity of an image (window/level) 114
Changing the study type related processing (basic MUSICA processing) 118
Adjusting the image processing parameters (advanced MUSICA processing) 120
Inverting an image 124
Displaying image saturation due to overexposure 125
Collimating an image 126
Applying shutters around a region of interest (ROI) 132
Extracting a region of interest (ROI) 134
Transforming an image 135
Rotating an image 136
Flipping an image 137
Zooming in/out on an image 138
Magnifying part of an image 143
Adding annotations to an image 144
Showing/hiding annotations 146
Showing/hiding grid lines 147
Measuring a distance 149
Calibrating distance measurements 151
Measuring an angle 155

Calculating the scan average level within a region of interest (ROI) 157
Calculating a density profile 159
Drawing a line 161
Drawing an arrow 163
Drawing a geometric form 165
Adding text 167
Editing an annotation 169
Deleting an annotation 171
Deleting an image 173
Consulting study information 174
Making a study report 175
Making an electronic study report 175
Marking a study as dictated 176
Marking images as the study summary 177
Saving an image 178
Printing a study 179
Print using the default layout (Quick Print) 179
Printing using a custom layout (Print Composer) 180
Transmitting a study 182
Re-routing print or transmit jobs 183
Archiving and retrieving a study 184
Importing a study 185
Exporting a study or an image 190
Exporting the image data to a Rislink file 193

Chapter 4: Customizing the IPD Viewer Software 195

Configuring the thumbnail demographic data 196
Configuring the image demographic data 198
Customizing the toolbars 200
Customizing the default toolbars 200
Creating custom toolbars 205
Configuring the study information 208
Customizing the panes 209
Customizing the search pane 209
Customizing the favorites pane 212
Customizing the list view pane 213
Setting predefined texts 216

Appendix A: **Glossary 219**

Appendix B: Index 223

Chapter 1

Introducing the IPD Viewer Software

This chapter covers the following topics:

- IPD Viewer Software features
- Modes of the IPD Viewer Software
- The user interface
- Starting the IPD Viewer Software
- Using the online Help
- Switching to the ID Software
- Switching to the QC Viewer Software
- Switching between Selector mode and Viewer mode
- Quitting the IPD Viewer Software

For a glossary of terms, refer to *Appendix A, 'Glossary'* on page *219*.

IPD Viewer Software features

❖ *A number of features are only available with certain licences. Refer to the Licence document for more information.*

The IPD Viewer Software is one of the major modules of the ADC Quality System. It offers the following features:

- Searching for studies in the local database and in remote databases.

  The IPD Viewer Software allows you to specify a number of search criteria for searching the local database or remote databases. You can customize these searches to suit your specific needs, and store searches for future use.

- Viewing studies for on-screen diagnosis.

  Once you have retrieved a number of studies from the database, you can select a specific study and display it for on-screen diagnosis. You can customize the viewing environment according to your preferences.

- Interactively processing images and adding annotations.

  The IPD Viewer Software offers you an extensive range of image processing and diagnosis-assisting functions, including:

  - Changing the global contrast and intensity of an image (window/level).
  - Adjusting the image processing parameters (advanced MUSICA processing).
  - Collimating an image.
  - Calculating the scan average level (SAL) within a region of interest (ROI).
  - Extracting a region of interest (ROI).
  - Transforming an image (rotating an image, zooming in/out on an image, etc.).
  - Adding annotations to an image (lines, arrows, geometric forms, texts, etc.).
  - Performing distance and angle measurements on images.
  - Calculating density profiles of images.

- Making a study report.

  When you have viewed a study and dictated the study report, you can mark the study as having been dictated. You can also record your findings in an electronic report which is saved as part of the study.

- Printing studies and images.

  Several printing options are available; you can choose between printing using the default layout, a non-default layout, or a custom layout.

- Archiving and retrieving studies.

  You can store studies on a nearline storage device for future use. At any time you can easily retrieve the archived studies.

Modes of the IPD Viewer Software

The IPD Viewer Software has two operating modes:

- The Selector mode.
- The Viewer mode.

You can seamlessly switch from Selector mode to Viewer mode and vice versa.

Selector mode

The Selector mode allows you to retrieve studies from the local database or from remote databases by means of search criteria. From the resulting list, you can subsequently select one or more studies.

Viewer mode

The Viewer mode allows you to view the studies which you have selected in Selector mode. The Viewer mode offers you a range of interactive image processing and diagnosis-assisting functions.

The user interface

The IPD Viewer Software has a Windows®-based user interface. Specific elements of the user interface in Selector mode and in Viewer mode are detailed here. For standard Windows® elements, we refer to the Windows® NT Help which you can invoke via the Start button on the Taskbar.

Selector mode

The user interface in Selector mode features the following specific user interface elements:

- Toolbars.
- Panes.

Toolbars

In **Selector mode**, the IPD Viewer Software features two toolbars:

- The **Standard toolbar** with shortcuts to the most frequently used functions.
  You can customize this toolbar according to your preferences. Refer to *'Customizing the toolbars'* on page *200*.

Standard toolbar

- The **Switch toolbar** allows you to quickly switch from Selector mode to Viewer mode and vice versa, to the ID Software, or to the QC Viewer Software.

Switch toolbar

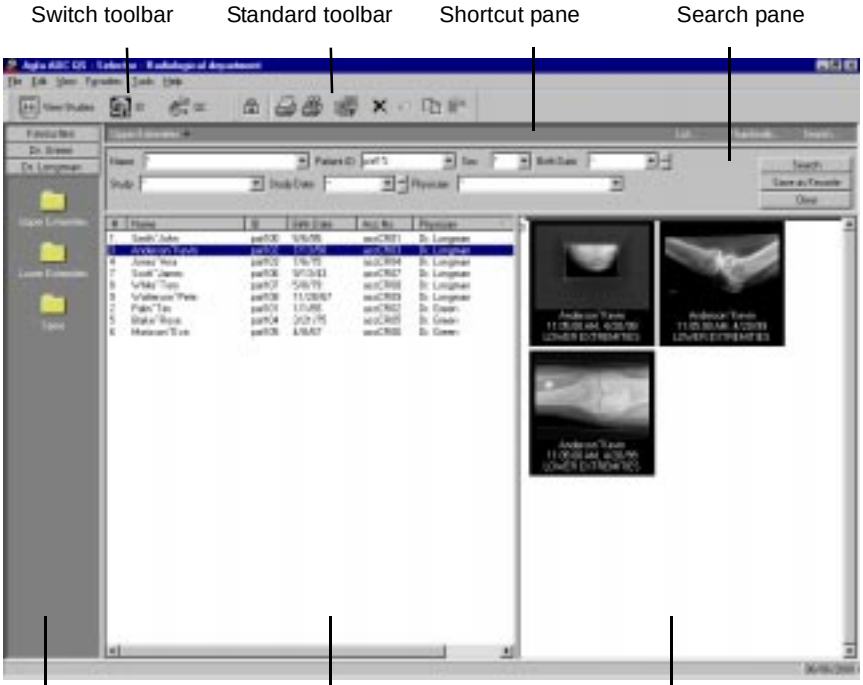
You can resize the toolbars, position them on the screen by dragging, and dock them by dragging them to the toolbar area.

Panes

In **Selector mode**, the main window of the IPD Viewer Software features the following panes:

- The **search pane**.
  The search pane contains a number of search criteria for retrieving studies from the local database.
- The **favorites pane**.
  The favorites pane allows you to easily and quickly search for studies in the local database via predefined sets of search criteria (favorites).
- The **list view pane**.
  The list view pane provides an overview of the studies which you have retrieved via the search pane.
- The **thumbnail pane**.
  The thumbnail pane shows the thumbnail images of studies.
- The **shortcut pane**.
  The shortcut pane allows you to quickly turn on or off the list view pane, thumbnail pane, and the search pane. It also provides quick access to favorites if the favorites pane is turned off.

You can customize the Selector mode by turning the different panes - with the exception of the shortcut pane - on or off according to your preferences. Refer to *'Selecting an on-screen presentation'* on page *33*. You can resize the panes by dragging the borders.


Switch toolbar
Standard toolbar
Shortcut pane
Search pane
Favorites pane
List view pane
Thumbnail pane

Viewer mode

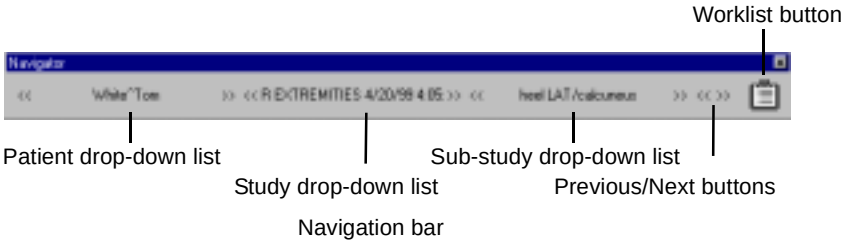
The user interface in Viewer mode features the following specific user interface elements:

- Navigation bar.
- Toolbars.
- Panes.

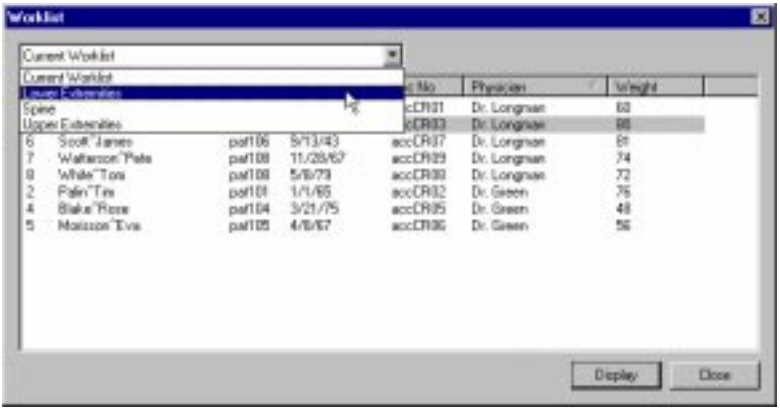
Navigation bar

Via the navigation bar, you can easily navigate in Viewer mode without switching to Selector mode.

You can navigate between the studies which you have **selected in Selector mode** via the drop-down lists, via the Previous and Next buttons, or via the Worklist button. The drop-down lists allow you to select either a specific patient, a study, or an image. You can browse through the images via the Previous and Next buttons.



Via the Worklist button on the navigation bar you can access the studies which you have **retrieved from the database** as well as the result of **favorite searches** (favorites).



Worklist dialog box

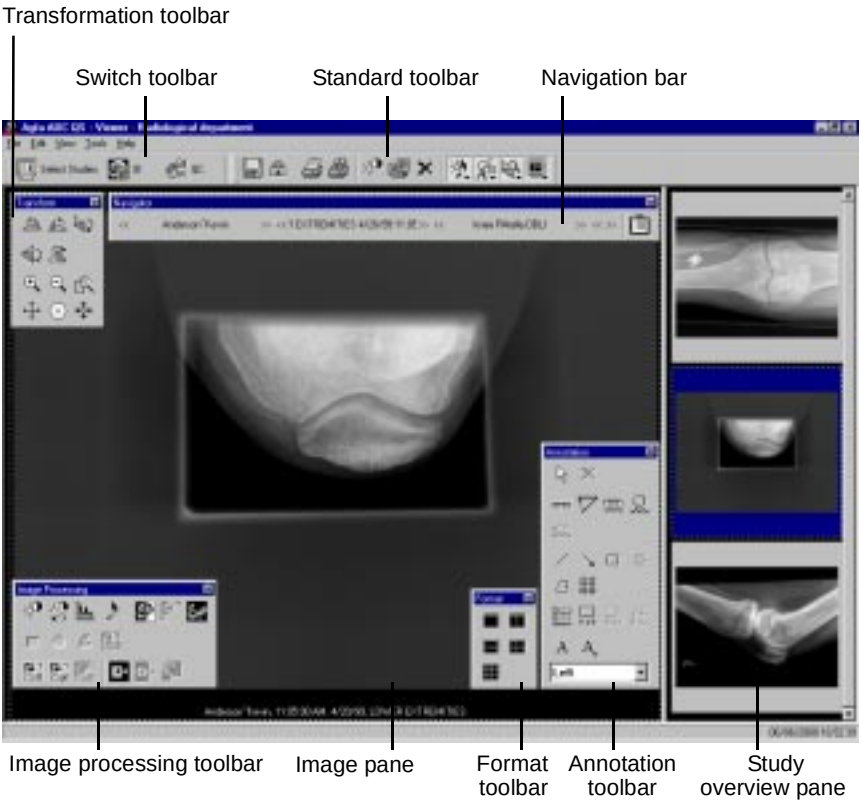
Toolbars

In **Viewer mode**, the IPD Viewer Software features the following toolbars:

- The **Format toolbar**.
  With the Format toolbar, you can customize the image pane. You can either view one, two, four or nine images at a time.
- The **Image Processing toolbar**.
  The Image Processing toolbar contains buttons for accessing the interactive image processing functions of the IPD Viewer Software: MUSICA processing, global contrast and intensity adjustment, collimation, etc.
- The **Transformation toolbar**.
  The Transformation toolbar offers access to functions for image transformation: rotation, flipping, zooming in/out, etc.
- The **Annotation toolbar**.
  The Annotation toolbar allows you to add annotations (lines, arrows, geometric forms, texts, etc.) to images, to perform angle and distance measurements, and to perform scan average level (SAL) and density profile calculations.
- The **Standard toolbar**.
  The Standard toolbar features shortcuts to the most frequently used functions.
- The **Switch toolbar**.
  The Switch toolbar allows you to quickly switch from Selector mode to Viewer mode and vice versa, to the ID Software, or to the QC Viewer Software.

You can resize the toolbars, position them on the screen by dragging, and dock them by dragging them to the toolbar area.

With the exception of the Switch toolbar, you can customize the above toolbars according to your preferences. For more information, refer to *'Customizing the toolbars'* on page *200*.



Panes

In **Viewer mode**, the main window of the IPD Viewer Software features the following panes:

- The **image pane**.
  The image pane contains the image(s) under examination. You can customize this pane for either viewing one large image or comparing several images of a study. Refer to *'Selecting a format for the image pane'* on page *93*.
- The **study overview pane**.
  The study overview pane displays the thumbnail images of the study under examination.

You can resize the image pane and the study overview pane by dragging the border between both panes.

Starting the IPD Viewer Software

To start the IPD Viewer Software, you need a username and a password. Contact your system administrator. For information on creating users, refer to the Reference manual of the Configuration Viewer.

To start the IPD Viewer Software:

1 Do one of the following:

- Double-click the ADC QS icon.
- Click the Start button, and then point to Agfa. Point to the ADC QS folder, and then click Viewer.

The Login dialog box is displayed.

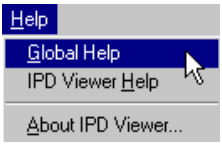
2 Type a valid username and password and click OK.

The ADC Quality System is started.

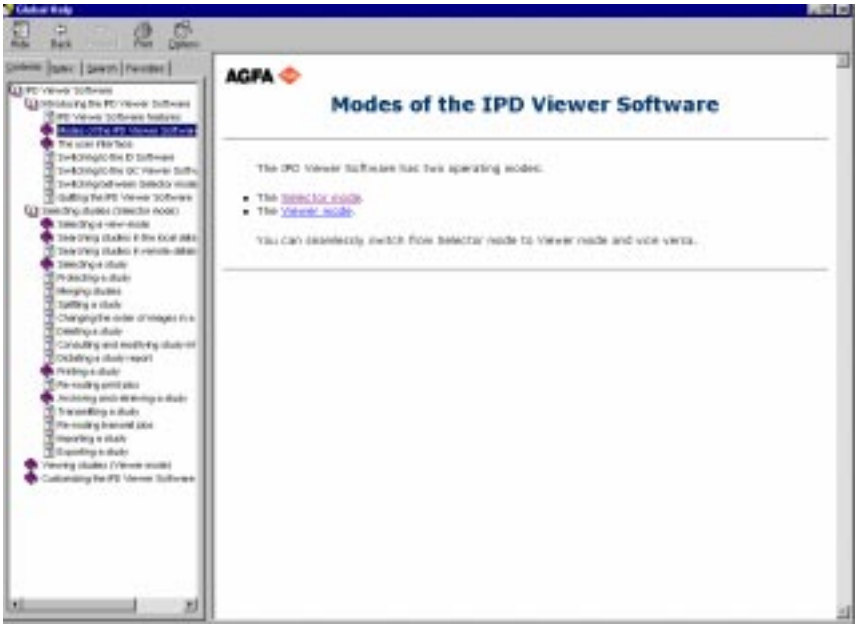
- If you start the ADC Quality System for the first time, the main window of the QC Viewer Software is displayed.
- If you have used the ADC Quality System before, the main window of the module which you used the previous time - either the ID Software, the QC Viewer Software, or the IPD Viewer Software - is displayed.

Using the online Help

You can invoke Help on the functions of the IPD Viewer Software via the Help menu. You can choose between Help on the IPD Viewer Software and Help on the global ADC Quality System (Global Help).



The online Help permits you to quickly and easily locate information; it has a table of contents, an index, a full-text search function, and a favorites function via which you can define favorite topics.



Online Help

Switching to the ID Software

From the IPD Viewer Software, you can easily call up the ID Software, whether you are working in Selector mode or in Viewer mode. This allows you to seamlessly switch from identifying studies to viewing them and vice-versa.

❖ *You can consult detailed study information from within the IPD Viewer Software. Refer to 'Consulting study information' on page 62.*

To switch from the to the ID Software:

On the View menu, click ID.

Alternatively, you can click the ID button on the Switch toolbar.

⚠ ***If you have modified an image, the program will automatically save your changes. No message is displayed, unless the Save Confirmation Option is set (Refer to 'Setting the Show Save Confirmation' on page 78 of the Online Processing Software Reference manual).***

The main window of the ID Software is displayed.

To switch from the ID Software to the IPD Viewer Software:

On the View menu, click IPD.

Alternatively, you can click the IPD button on the Switch toolbar.

The main window of the IPD Viewer Software is displayed.

Switching to the QC Viewer Software

From the IPD Viewer Software, you can easily call up the QC Viewer Software, whether you are working in Selector mode or in Viewer mode. Thus you can easily switch back and forth between checking image quality and viewing studies.

To switch from the IPD Viewer Software to the QC Viewer Software:

On the View menu, click QC.

Alternatively, you can click the QC button on the Switch toolbar.

If you have modified an image, the program will automatically save your changes. No message is displayed, unless the Save Confirmation Option is set (Refer to 'Setting the Show Save Confirmation' on page 78 of the Online Processing Software Reference manual).

The main window of the QC Viewer Software is displayed.

To switch from the QC Viewer Software to the IPD Viewer Software:

On the View menu, click IPD.

Alternatively, you can click the IPD button on the Switch toolbar.

The main window of the IPD Viewer Software is displayed.

Switching between Selector mode and Viewer mode

The **Selector mode** allows you to retrieve studies from the local database or from remote databases on the basis of search criteria. From the resulting list, you can subsequently select a number of studies.

Once you have selected studies, you can view them in **Viewer mode**. This mode offers you a range of interactive image processing and diagnosis-assisting functions.

To switch from Selector mode to Viewer mode:

1 In Selector mode, select one or more studies.

Refer to *'Selecting a study'* on page *54*.

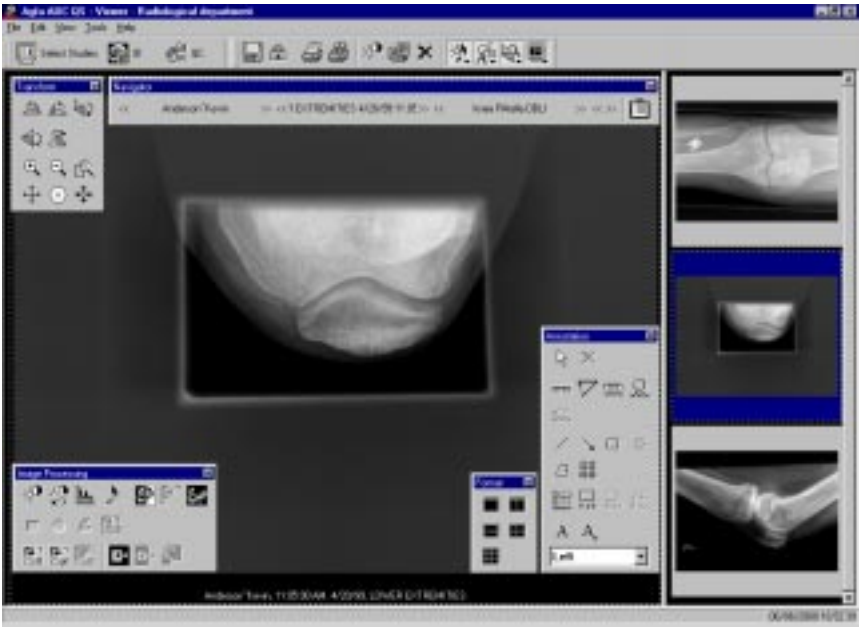
2 To switch to Viewer mode, do one of the following:

- On the File menu, click View Studies.
- Click the View Studies button on the Switch toolbar.

If you have selected only one study, you can also do one of the following:

- Double-click the study in the list view pane.
  Refer to *'Showing/hiding the list view pane'* on page *36*.
- Double-click a thumbnail of the study in the thumbnail pane.
  Refer to *'Showing/hiding the thumbnail pane'* on page *37*.

The IPD Viewer Software switches to Viewer mode.



❖ *When you are working in Viewer mode, the navigation bar allows you to switch between the studies which you have selected in Selector mode. You do not need to return to Selector mode. Refer to 'Navigating in Viewer mode' on page 96.*

To switch from Viewer mode to Selector mode:

On the File menu, click Select.

Alternatively, you can click the Select Studies button on the Switch toolbar.

The IPD Viewer Software switches to Selector mode.

Quitting the IPD Viewer Software

Both in Selector mode and in Viewer mode, you can close the IPD Viewer Software.

If you have not saved changes to an image, save them before quitting. No warning message is displayed if you quit the IPD Viewer Software.

To quit the IPD Viewer Software:

1 If you have modified an image and you wish to save your changes, either replace the existing image or save the changed image as a new image.

To	Do this
Replace the existing image with the changed image	On the File menu, click Save. Alternatively, you can click the Save button on the Standard toolbar. 
Save the changed image as a new image which is added to the study	On the File menu, click Save as New.

The image is stored in the local database.

2 On the File menu, click Exit.

The IPD Viewer Software is closed.

Chapter 2

Selecting studies (Selector mode)

The Selector mode allows you to retrieve studies from the local database or from remote databases. This chapter covers the following topics:

- Selecting an on-screen presentation
- Searching the local database
- Searching remote databases
- Selecting a study or an image
- Protecting a study
- Changing the order of images in a study
- Transferring an image to another study
- Deleting a study or an image
- Consulting study information
- Marking a study as dictated

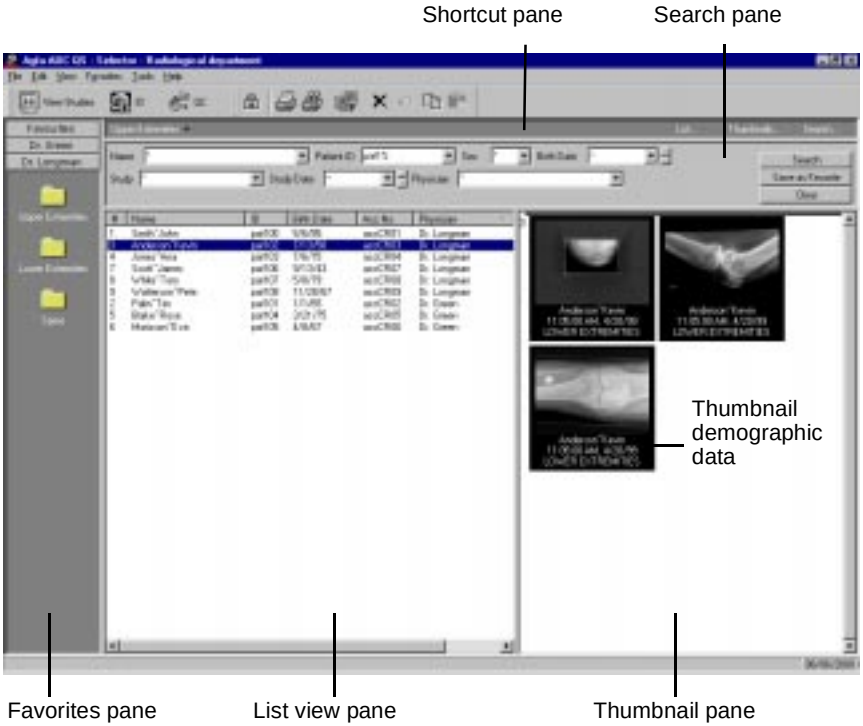
- ❑ Printing a study or an image
- ❑ Transmitting a study or an image
- ❑ Re-routing print or transmit jobs
- ❑ Archiving and retrieving a study
- ❑ Importing a study
- ❑ Exporting a study
- ❑ Exporting the study or image data to a Rislink file

Selecting an on-screen presentation

The IPD Viewer Software allows you to customize the Selector mode to suit your specific needs.

You can do one or more of the following

- Showing/hiding the search pane.
- Showing/hiding the favorites pane.
- Showing/hiding the list view pane.
- Showing/hiding the thumbnail pane.
- Showing/hiding related prior studies.



Showing/hiding the search pane

In the search pane you can select the search criteria for searching the local database.

Search pane

To turn the search pane on or off:

On the View menu, click Search.

A check mark means that the search pane is turned on.

Alternatively, you can click the Search button in the shortcut pane.

Shortcut pane

➤ To configure the search fields which must be used for searching the database, refer to *'Customizing the search pane'* on page *209*.

Showing/hiding the favorites pane

The favorites pane contains favorite sets of search criteria (favorites) for searching the local database. It also contains groups of favorites. The favorites pane allows you to easily and quickly search for studies.

To turn the favorites pane on or off:

On the View menu, click Favorites Pane.

A check mark means that the favorites pane is turned on.

❖ *If the favorites pane is turned off, the favorites drop-down list in the shortcut pane allows you to switch between favorites of a group.*

➤ To customize the favorites pane, refer to *'Customizing the favorites pane'* on page *212*.

➤ For information on defining favorites and groups of favorites, refer to *'Defining a favorite'* on page *44* and *'Defining a group of favorites'* on page *48* respectively.

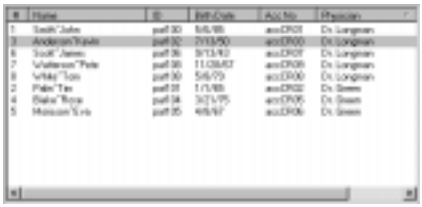
Showing/hiding the list view pane

The list view pane gives an overview of the studies which you have retrieved via the search pane. The list view pane lists study data such as patient name, patient ID, accession number, etc.

To turn the list view pane on or off:

On the View menu, click List View.

A check mark means that the list view pane is turned on.



List view pane

➤ To customize the study data displayed in the list view pane (column headers), the order of the columns and the sort order in the list view pane, refer to *'Customizing the list view pane'* on page *213*.

➤ To configure your system to display related prior studies in the list view pane, refer to the Reference manual of the Configuration Viewer.

Showing/hiding the thumbnail pane

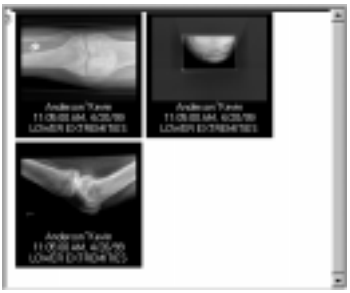
The thumbnail pane shows thumbnail images of studies.

- If the list view pane is turned off, the thumbnail pane shows the thumbnail images of the studies which you have retrieved via the search pane. The studies are automatically selected.
- If the list view pane is turned on, the thumbnail pane shows the thumbnail images of the studies which you have retrieved via the search pane and subsequently selected via the list view pane.

To turn the thumbnail pane on or off:

On the View menu, click Thumbnails.

A check mark means that the thumbnail pane is turned on.



Thumbnail pane

Showing/hiding the thumbnail demographic data

If the thumbnail pane is turned on, you can view the thumbnails either with or without the demographic data displayed below them.

To turn the thumbnail demographic data on or off:

On the View menu, click Thumbnail Demographics.

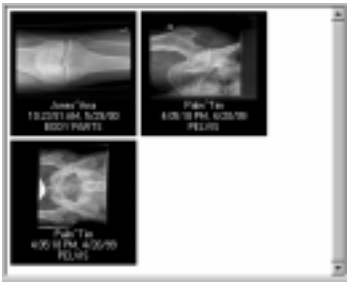
A check mark means that the thumbnail demographic data are turned on.

➤ To configure which study data are displayed as thumbnail demographic data, refer to *'Configuring the thumbnail demographic data'* on page *196*.

Grouping thumbnails

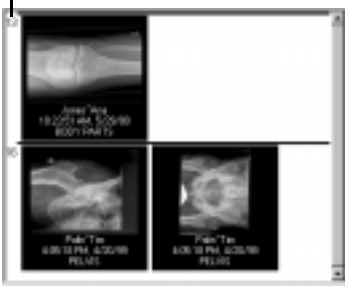
If the thumbnail pane is turned on, you can either:

- View all thumbnails next to each other.
  All thumbnails are displayed next to each other.
- View the thumbnails grouped per study.
  The thumbnails are grouped per study; thumbnails of one study are separated from thumbnails of other studies by a horizontal line and are preceded by a sequence number.



Grouping of thumbnails turned off

Sequence number



Grouping of thumbnails turned on

To turn grouping thumbnails on or off:

On the View menu, click Group Thumbnails.

A check mark means that grouping of thumbnails is turned on.

Showing/hiding related prior studies

Related prior studies are previously performed studies which are related to the study you are presently working with. The IPD Viewer Software can be configured to retrieve related prior studies when you search the database.

If the IPD Viewer Software is configured to retrieve related prior studies, you can show or hide prior studies in your search results.

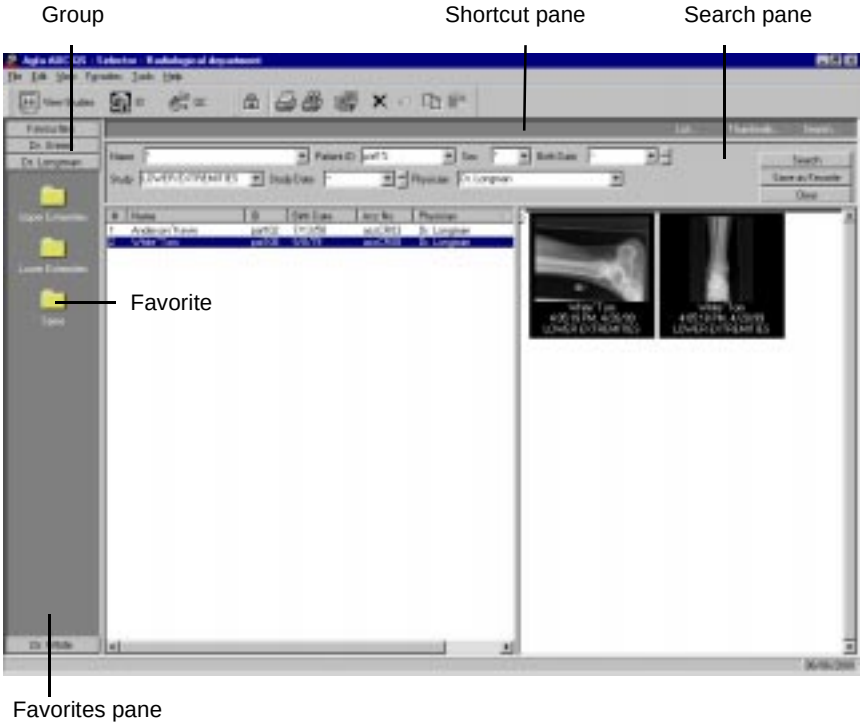
➤ For information on configuring the IPD Viewer Software to retrieve related prior studies, refer to the Reference manual of the Configuration Viewer.

Searching the local database

To search for studies in the local database, you must specify a set of search criteria in the search pane. The resulting set of studies will be displayed in the list view pane and the thumbnail pane. For defining a search, refer to *'Defining a search'* on page *42*.

Once you have defined a search, you can save it for future use by saving it as a favorite. Refer to *'Defining a favorite'* on page *44*.

Sets of favorites can be grouped according to a common characteristic. For more information, refer to *'Defining a group of favorites'* on page *48*.



Defining a search

You can define a search by selecting the desired search criteria in the search pane. The search will be applied to all studies in the local database. The result will be updated continuously as new studies reach the ADC QS Station.

❖ *If you wish the search results to be selected automatically, work in automatic selection mode. Refer to 'Turning automatic selection of search results on/off' on page 43.*

To define a search:

1 Type or select for each search field a search criterion while observing the following rules:

- Entries in the Name field must have the format [Last name]^[First name], e.g. Anderson^Kevin.
- Entries are case sensitive.
- The wildcard character for one or more characters is %.
- The character * means 'All', i.e no criterion for the search field.

❖ *To clear all search fields, click Clear on the Favorites menu or click the Clear button in the search pane.*

2 Click the Search button in the search pane.

If the list view pane is turned on, the resulting set of studies is displayed in the list view pane.

If the list view pane is turned off, the thumbnails of the resulting set of studies are displayed in the thumbnail pane. The studies are automatically selected.

➤ To define which search fields are included in the search pane, refer to *'Customizing the search pane'* on page *209*.

Turning automatic selection of search results on/off

If automatic selection of search results is turned on, the studies retrieved from the database are automatically selected. This feature is very useful if you are working with the list view pane turned on and you wish to make all search results available in the navigation bar in Viewer mode. You can then perform a search and immediately switch to Viewer mode without having to select studies manually.

To turn automatic selection on or off:

On the Edit menu, click Auto Select All.

A check mark means that automatic selection of search results is turned on.

Defining a favorite

You can save a search for future use by saving it as a favorite. You can execute the search corresponding to the favorite by simply clicking the icon of the favorite in the favorites pane. The result will be updated continuously as new studies reach the ADC QS Station. You can rename and delete favorites.

Example of a favorite:

Today's studies: This search retrieves all studies which are scheduled for today.

- ❖ *The default favorite 'Today' has been created when your system was configured.*

- ❖ *You can group favorites according to a common characteristic. If you wish to work with groups of favorites, you must first create a group before creating the favorites. Refer to 'Defining a group of favorites' on page 48.*

Saving a favorite search

To save a search as a favorite, you can either start from a new search or modify an existing favorite.

To save a search as a favorite:

1 Turn on the favorites pane.

Refer to *'Showing/hiding the favorites pane'* on page *35*.

2 If you wish the favorite to be part of a custom group of favorites, create the group.

Refer to *'Defining a group of favorites'* on page *48*.

3 In the favorites pane, click the button of the group to which you wish to add the favorite.

If you have not created a custom group, the favorite will be added to the default group Favorites.

4 Do one of the following:

- Define a new search.
  Refer to *'Defining a search'* on page *42*.
- Modify an existing favorite: on the Favorites menu, click the name of an existing favorite and modify the search criteria.
  Alternatively, you can click the icon of an existing favorite in the favorites pane and modify the search criteria.

5 On the Favorites menu, click Save As.

Alternatively, you can click the Save as Favorite button in the search pane.

A new favorite is created in the favorites pane. Its name is highlighted.

6 Type the name of the new favorite.

7 Press ENTER.

The new favorite is added to the selected group in the favorites pane.

Renaming a favorite

You can change the name of the favorite as it is displayed in the favorites pane.

To rename a favorite:

1 Turn on the favorites pane.

Refer to *'Showing/hiding the favorites pane'* on page *35*.

2 On the Favorites menu, click the name of the favorite which you wish to rename.

Alternatively, you can click the icon of the favorite in the favorites pane.

The icon of the favorite is now an open folder.

3 On the Favorites menu, click Rename.

The name of the favorite in the favorites pane is highlighted.

4 Type the new name.

5 Press ENTER.

The favorite is given the new name.

Deleting a favorite

If a favorite is no longer useful, you can delete it from the favorites pane.

Once a favorite has been deleted, it can by no means be restored!

To delete a favorite:

1. Turn on the favorites pane.
   Refer to *'Showing/hiding the favorites pane'* on page *35*.

2. On the Favorites menu, click the name of the favorite which you wish to delete.
   Alternatively, you can click the icon of the favorite in the favorites pane.
   The icon of the favorite is now an open folder.

3. On the Favorites menu, click Delete.
   A warning message is displayed.

4. To delete the favorite, click Yes.
   The favorite is deleted from the favorites pane.

Defining a group of favorites

You can group favorites according to a common characteristic. You can rename and delete groups.

Example of a group:

Dr. Longman: This group contains all the favorite searches of Dr. Longman.

- *If you define a group of favorites per radiologist, several radiologists can seamlessly share one ADC QS Station.*

- *When your system was configured, a default group 'Favorites' has already been created.*

Creating a group of favorites

If you wish to work with groups of favorites, you must first create a group before creating the favorites.

To create a group:

1. Turn on the favorites pane.
   Refer to *'Showing/hiding the favorites pane'* on page *35*.
2. On the Favorites menu, click Groups, and then Add Group.
   A new group is created in the favorites pane. Its name is highlighted.
3. Type the name of the new group.
4. Press ENTER.
   The new group is added to the favorites pane.

Selecting a group of favorites

To select a favorite of a group, you must first select the group because the favorites pane displays only the favorites of the selected group.

To select a group:

1. Turn on the favorites pane.
   Refer to *'Showing/hiding the favorites pane'* on page *35*.
2. Click the button of the group in the favorites pane.

The favorites of the group are displayed in the favorites pane.

Renaming a group of favorites

You can change the name of the group as it is displayed in the favorites pane.

To rename a group:

1 Turn on the favorites pane.
Refer to *'Showing/hiding the favorites pane'* on page *35*.

2 Click the button of the group in the favorites pane.

3 On the Favorites menu, click Groups, and then Rename Group.
The name of the group is highlighted.

4 Type the new name.

5 Press ENTER.

Deleting a group of favorites

If a group of favorites is no longer useful, you can delete it from the favorites pane. However, you cannot delete the default group 'Favorites'.

Once a group of favorites has been deleted, it can by no means be restored!

To delete a group:

1. Turn on the favorites pane.
   Refer to *'Showing/hiding the favorites pane'* on page *35*.

2. Click the button of the group in the favorites pane.

3. On the Favorites menu, click Groups, and then Delete Group.
   A warning message is displayed.

4. To delete the group, click Yes.
   The group is deleted from the favorites pane.

Searching remote databases

Apart from searching the local database, you can search databases on remote volumes.

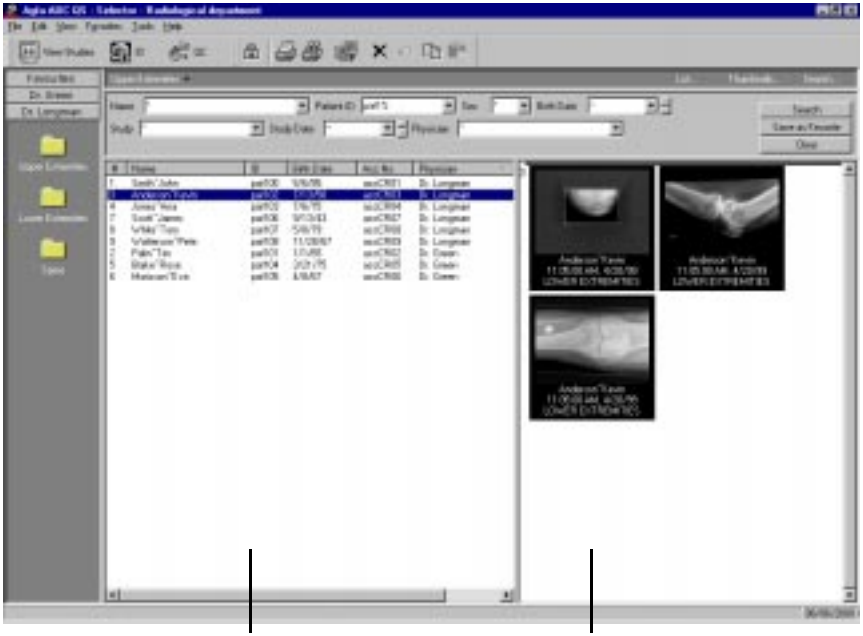
Selecting a study or an image

Selecting a study is necessary when you wish to perform actions such as:

- Viewing a study for on-screen diagnosis.
- Printing a study.
- Transmitting a study to a DICOM review or archive station.
- Deleting a study.
- Consulting study information, etc.

In Selector mode, you can also select a single image. A limited number of actions are possible on an image basis:

- Deleting an image.
- Printing an image.
- Transmitting an image to a DICOM review or archive station.
- Exporting the image data to a Rislink file.



Selecting a study

The way you select studies depends on whether or not the list view pane is turned on.

- If the list view pane is turned on, you can either manually select studies via the list view pane, or you can work in automatic selection mode.
- If the list view pane is turned off, the studies which you retrieve from the database will be selected automatically.

To manually select one or more studies if the list view pane is turned on:

1 Define a search with the appropriate search criteria.

Refer to *'Defining a search'* on page *42*. The resulting set of studies is displayed in the list view pane.

2 Select the studies:

To select	Do this
A single study	Click the study in the list view pane.
Multiple nonadjacent studies	Click a single study, and then hold down the CTRL key while you click other studies which you wish to select.
Multiple adjacent studies	Click a single study, and then hold down the SHIFT key while you click the last study of the range of studies which you wish to select.
All studies	On the Edit menu, click Select All.

Selected studies are highlighted in the list view pane. If the thumbnail pane is turned on, the thumbnails of the selected studies will be displayed in the thumbnail pane.

To automatically select studies if the list view pane is turned on:

1 On the Edit menu, click Auto Select All.

A check mark means that automatic selection of search criteria is turned on.

2 Define a search with the appropriate search criteria.

Refer to *'Defining a search'* on page *42*. The resulting set of studies is displayed in the list view pane. All studies are automatically selected.

To automatically select studies if the list view pane is turned off:

1 Make sure that the thumbnail pane is turned on.

Refer to *'Showing/hiding the thumbnail pane'* on page *37*.

2 Define a search with the appropriate search criteria.

Refer to *'Defining a search'* on page *42*. The thumbnail images of the resulting set of studies are displayed in the thumbnail pane. All studies are automatically selected.

Selecting an image

The way you select images depends on whether or not the list view pane is turned on.

- If the list view pane is turned on, you must first select the studies and subsequently the images within the studies.
- If the list view pane is turned off, you can directly select the images via the thumbnail pane.

To select one or more images if the list view pane is turned on:

1 Make sure that the thumbnail pane is turned on.

Refer to *'Showing/hiding the thumbnail pane'* on page *37*.

2 Select the studies for which you wish to select images.

Refer to *'Selecting a study'* on page *54*.

3 Click the thumbnails of the images which you wish to select.

The thumbnails of selected images are highlighted in the thumbnail pane.

To deselect a selected image, click the thumbnail.

To select one or more images if the list view pane is turned off:

1 Make sure that the thumbnail pane is turned on.

Refer to *'Showing/hiding the thumbnail pane'* on page *37*.

2 Define a search with the appropriate search criteria.

Refer to *'Defining a search'* on page *42*. The thumbnail images of the resulting set of studies are displayed in the thumbnail pane. All studies are automatically selected.

3 Click the thumbnails of the images which you wish to select.

The thumbnails of selected images are highlighted in the thumbnail pane.

To deselect a selected image, click the thumbnail.

Protecting a study

Studies are stored on the hard disk of the ADC QS Station. However, as the capacity of the hard disk is limited, only a certain number of studies can be stored. As the used space of the hard disk reaches the full capacity, the data of the oldest studies are automatically deleted and replaced with data from recent studies. You can, however, protect a study against automatic removal.

To protect one or more studies:

1 Select the studies which you wish to protect.

Refer to *'Selecting a study'* on page *54*.

To protect a range of studies, at least one study must be unprotected. A study is unprotected if the Protect button on the Standard toolbar is not pressed.

2 On the File menu, click Mark as Protected.

Alternatively, you can click the Protect button on the Standard toolbar.

The Protect button is pressed: the studies are protected.

❖ *If you select a range of studies for which at least one study has not been protected, the Protect button on the Standard toolbar will not be pressed, although other studies in the range may be protected.*

To remove the protection from one or more studies:

1 Select the protected studies from which you wish to remove the protection.

Refer to *'Selecting a study'* on page *54*.

To remove the protection from a range of studies, all studies must be protected. A study is protected if the Protect button on the Standard toolbar is pressed.

❖ *If you select a range of studies for which at least one study has not been protected, the Protect button on the Standard toolbar will not be pressed, although other studies in the range may be protected.*

2 On the File menu, click Mark as Protected.

Alternatively, you can click the Protect button on the Standard toolbar.

The Protect button is in its normal state: the studies are unprotected.

Changing the order of images in a study

The images of a study are displayed in the thumbnail pane in the order in which they have been identified in the ID Software. However, in Selector mode, you can rearrange the images within a study by dragging them in the thumbnail pane.

To change the order of the images in a study:

1 Make sure that the thumbnail pane is turned on.

Refer to *'Showing/hiding the thumbnail pane'* on page *37*.

2 Select the studies for which you wish to change the image order.

Refer to *'Selecting a study'* on page *54*.

3 Drag the thumbnails in the thumbnail pane.

The new order is automatically saved in the database.

Transferring an image to another study

If an image is allocated in a wrong study, you can move the image to the correct study via image transfer.

To transfer an image to another study:

1 On the Tools menu, click Enable Image Transfer.

❖ *The transfer is only valid for 1 image, so you have to enable this function every time to use it.*

2 Go to the study folder with the image you wish to transfer.

Refer to *'Selecting a study'* on page *54* and *'Selecting an image'* on page *56*.

3 Drag the image to the correct study folder and release it.

A pop up window will warn you that the image will be erased from the original study. Click OK if you want to confirm the transfer, or Cancel to leave the situation unchanged.

The image transfer is now complete.

Tips:

❖ *If an image is transferred out of a single image study then you will be left with an empty study. You can then delete the folder to remove it (refer to 'Deleting a study or an image' on page 61.*

❖ *To create an new empty study folder to transfer an image to, identify a cassette (with the correct study information) an put it trough the digitizer.*

Deleting a study or an image

In Selector mode, you can delete studies or single images which are stored in the local database.

Once a study or an image has been deleted, it can by no means be restored!

To delete a study or an image:

1 Select the study or the image which you wish to delete.

Refer to *'Selecting a study'* on page *54* and *'Selecting an image'* on page *56* respectively.

2 On the Edit menu, click Delete.

Alternatively, you can click the Delete button on the Standard toolbar.

A warning message is displayed.

3 To delete the study or image, click Yes.

The study or image is deleted from the local database.

Consulting study information

In Selector mode, you can consult detailed information on a particular study. Data include patient-, study- and image information.

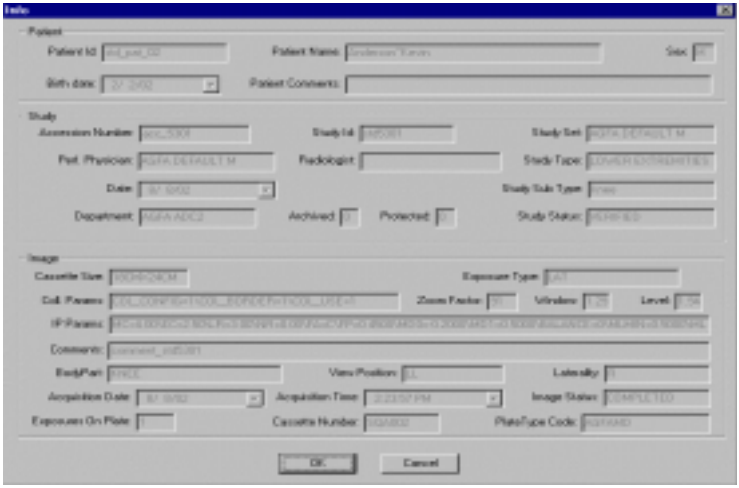
➤ To configure which study data are displayed in the Info dialog box, refer to *'Configuring the study information'* on page *208*.

1 Select the study of which you wish to consult information.

Refer to *'Selecting a study'* on page *54*.

2 On the Tools menu, click Study Information.

Detailed information on the study is displayed.



3 Click OK or Cancel.

Marking a study as dictated

If you have dictated a study report, you can mark the study as having been dictated. This information is saved as one of the study data.

To mark one or more studies as having been dictated:

1 Select the studies on which a report has been dictated.

Refer to *'Selecting a study'* on page *54*.

To mark a range of studies as having been dictated, at least one study must be unmarked. A study is unmarked if the Mark as Dictated command on the File menu is not marked.

2 On the File menu, click Mark as Dictated.

A check mark means that the studies are marked as having been dictated.

- *If you select a range of studies for which at least one study has not been marked as having been dictated, the Mark as Dictated command will not be checked.*

- *If you have accidentally marked a study as having been dictated, you can unmark the study by selecting it and clicking Mark as Dictated on the File menu.*

Printing a study or an image

In Selector mode you can print studies or single images according to your specific needs.

You can either:

- Print using the default layout via Quick Print.
- Print using a non-default or a custom layout via the Print Composer.

Print using the default layout (Quick Print)

Your ADC Quality System can be configured so that each study type is associated with a default printer and a default layout. If for a specific study type no default printer and/or default layout has been configured, the system default printer and/or layout will be considered to be the default.

To print using the default layout on the default printer:

1 Select the studies or images which you wish to print.

Refer to *'Selecting a study'* on page *54* and *'Selecting an image'* on page *56* respectively.

2 Click the Quick Print button on the Standard toolbar.

Depending on the configuration of your ADC Quality System, the studies or images will be printed on the configured or the system default printer using the configured or the system default layout.

➤ For information on configuring the printers of your ADC Quality System, refer to the Reference manual of the Configuration Viewer.

Print using a custom layout (Print Composer)

Via the Print Composer, you can print on factory defined layouts or on previously saved custom layouts. You can print either a range of studies or a selection of images.

➤ For information on defining custom layouts, refer to the Reference manual of the Print Composer.

To print using a non-default or a custom layout:

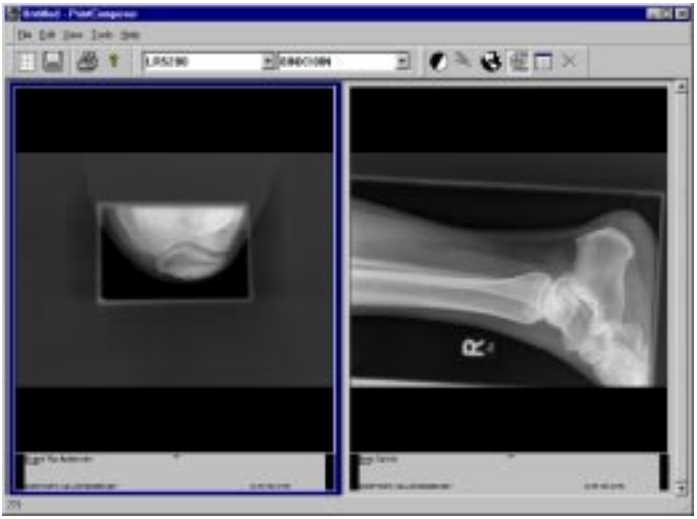
1 Select the studies or images which you wish to print.

Refer to *'Selecting a study'* on page *54* and *'Selecting an image'* on page *56* respectively.

2 On the File menu, click Print Composer.

Alternatively, you can click the Print Composer button on the Standard toolbar.

The Print Composer main window is displayed.



If you have selected one or more studies, all images of the selected studies are displayed in the print preview.

If you have selected one or more images, all selected images are displayed in the print preview.

3 Set the print options such as the printer, the film format and the film layout.

Refer to the Reference manual of the Print Composer.

4 On the File menu of the Print Composer, click Print.

Alternatively, you can click the Print button on the toolbar of the Print Composer.

The Print dialog box is displayed.

5 Set the print options such as the film range and the number of copies.

Refer to the Reference manual of the Print Composer.

6 Click OK.

Transmitting a study or an image

The IPD Viewer Software allows you to transmit studies or single images from your ADC QS Station to a DICOM station. You can do this to review studies or images on another station or as a means to manually archive studies or images.

To transmit one or more studies or images:

1 Select the studies or images which you wish to transmit.

Refer to *'Selecting a study'* on page *54* and *'Selecting an image'* on page *56* respectively.

2 On the File menu, click Transmit.

Alternatively, you can click the Transmit button on the Standard toolbar.

The Transmit dialog box is displayed.

3 In the Destination list, click the destination to which you wish to transmit the studies or images.

4 Click Transmit.

The studies or images are saved in the local database of the destination.

Re-routing print or transmit jobs

Your ADC Quality System can be configured so that each study type is associated with a default printer and a default DICOM station. If for a specific study type no default printer or default DICOM station has been configured, the system default printer/DICOM station will be considered to be the default.

Normally, new studies reaching the ADC QS Station are automatically sent to the default printer and the default DICOM station. However, if e.g. the configured default printer is out of service, you can set another printer to temporarily be the default printer. Similarly, you can re-route transmit jobs to another DICOM station if the configured default DICOM station is out of service.

➤ To configure the default printer or the DICOM station for a study type, refer to the Reference manual of the Configuration Viewer.

Archiving and retrieving a study

Studies are stored on the hard disk of the ADC QS Station. However, as the capacity of the hard disk is limited, only a certain number of studies can be stored. As the used space of the hard disk reaches the full capacity, the data of the oldest studies are automatically deleted and replaced with data from recent studies. You can, however, archive studies on a Digital Linear Tape (DLT) nearline storage device for future use.

❖ *Via the Configuration Viewer, you can configure the nearline storage device. For more information, refer to the Reference manual of the Configuration Viewer.*

Archived studies can be retrieved from the nearline storage device and temporarily stored on the hard disk of the ADC QS Station.

Importing a study

Apart from allowing you to work with studies which are stored in the local database of the ADC QS Station, the IPD Viewer Software allows you to import studies from portable media such as writable CD, digital video disc (DVD), magneto-optic disc (MOD), Jaz® drive, etc. provided that your ADC QS Station is equipped with the necessary hardware. The studies are then temporarily added to the database of the ADC QS Station.

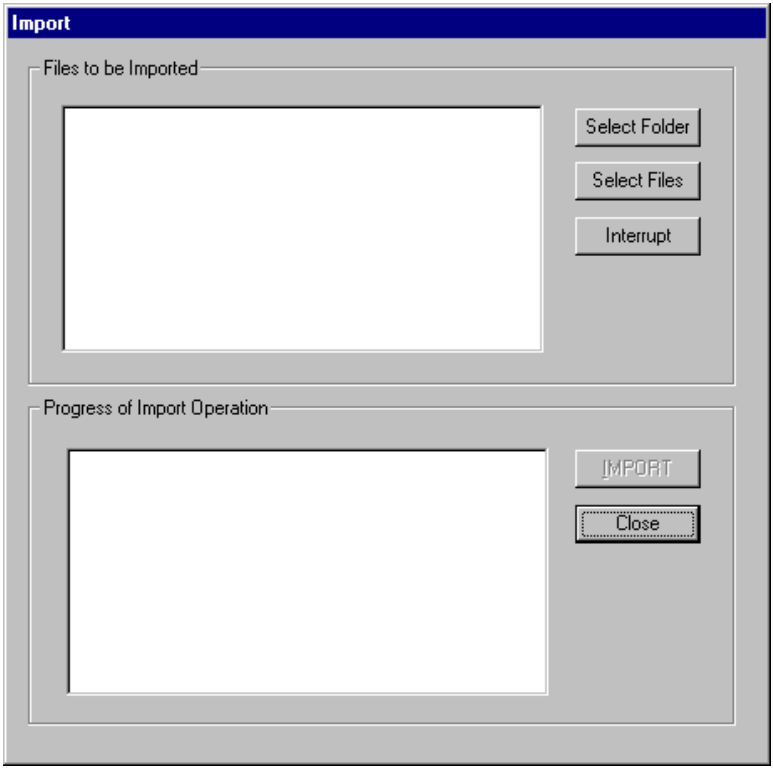
You can import either one or more studies of a folder or an entire folder.

❖ *You can only import studies which have the XML format.*

❖ *The IPD Viewer Software keeps a history file listing the files which have been imported. If you have paused the import operation, this file allows you to easily resume the operation.*

To import one or more studies of a folder:

1 On the File menu, click Import.
The Import dialog box is displayed.



2 Click Select Files.

The Select dialog box is displayed.

3 In the Look In box, click the drive corresponding to the portable medium containing the studies you wish to import.

4 In the folder list, double-click folders until you open the appropriate folder.

5 Select the studies which you wish to import:

To select	Do this
A single study	Click the study.
Multiple nonadjacent studies	Click a single study, and then hold down the CTRL key while you click other studies which you wish to select.
Multiple adjacent studies	Click a single study, and then hold down the SHIFT key while you click the last study of the range of studies which you wish to select.

6 Click Select.

The studies which you have selected are listed in the Files to be Imported list.

7 Click Import.

The progress is indicated in the Progress of Import Operation list.

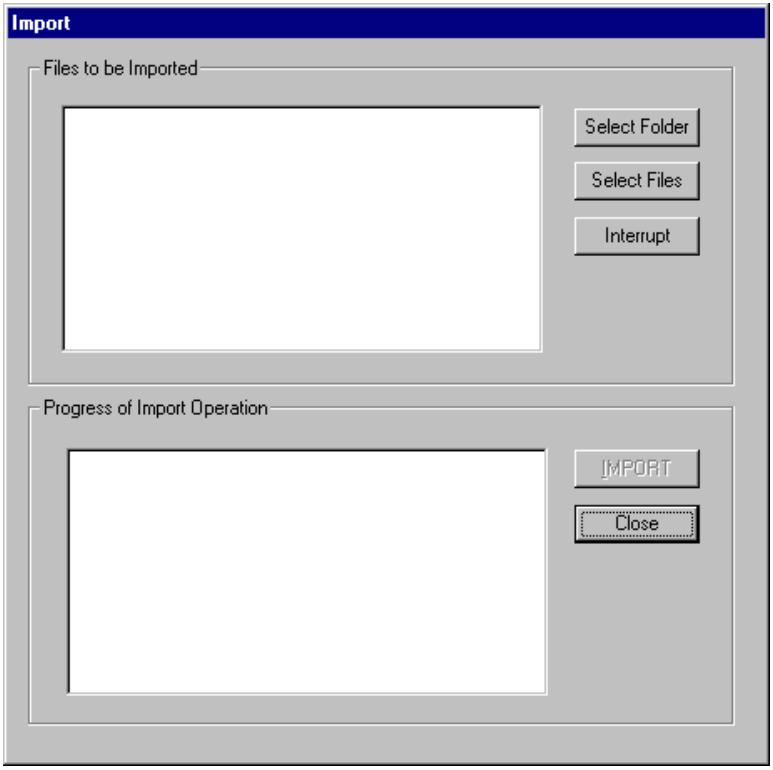
8 Wait until the message 'Operation completed' is displayed in the Progress of Import Operation list.

9 Click Close.

The studies are saved in the local database. If they match the current search criteria, they are displayed in the Selector.

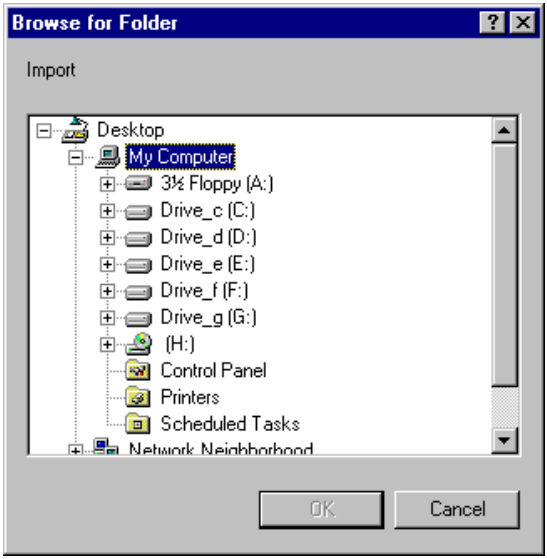
To import all studies of a folder:

1 On the File menu, click Import.
The Import dialog box is displayed.



2 Click Select Folder.

The Browse for Folder dialog box is displayed.



3 In the tree, double-click the drive corresponding to the portable medium containing the folder which you wish to import.

4 Double-click folders until you reach the appropriate folder.

5 Click the folder.

6 Click OK.

All files in the folder are listed in the Files to be Imported list.

7 Click Import.

The progress is indicated in the Progress of Import Operation list.

8 Wait until the message 'Operation completed' is displayed in the Progress of Import Operation list.

9 Click Close.

The studies are saved in the local database. If they match the current search criteria, they are displayed in the Selector.

Exporting a study

The IPD Viewer Software allows you to save studies on portable media such as writable CD, digital video disc (DVD), magneto-optic disc (MOD), Jaz® drive, etc. provided that your ADC QS Station is equipped with the necessary hardware.

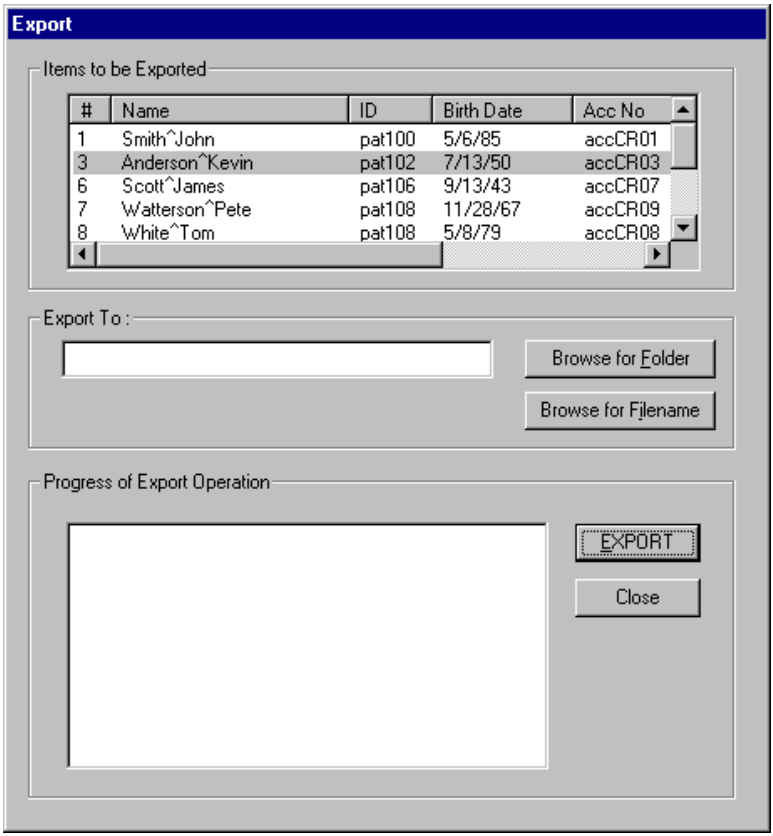
You can either export the studies with a default name assigned by the IPD Viewer Software, or with a custom name.

❖ *In Selector mode, you can only export entire studies in the XML format. If you wish to export single images, you must switch to Viewer mode. Refer to 'Exporting a study or an image' on page 190.*

To export one or more studies with the default name:

1 Define a search with the appropriate search criteria.
Refer to *'Defining a search'* on page *42*.

2 On the File menu, click Export.
The Export dialog box is displayed.

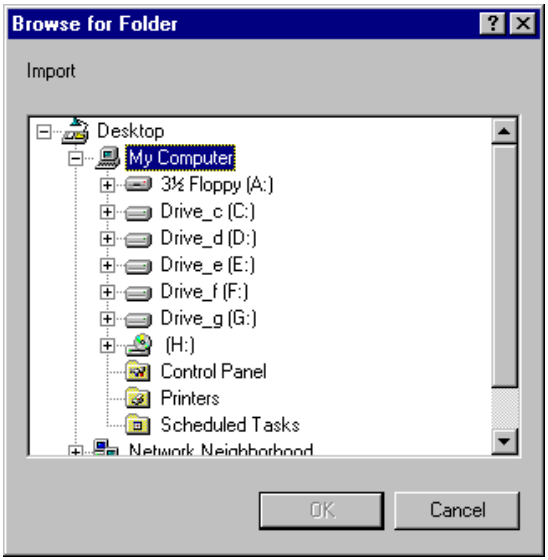


3 In the Items to be Exported box, select the studies which you wish to export:

To select	Do this
A single study	Click the study.
Multiple nonadjacent studies	Click a single study, and then hold down the CTRL key while you click other studies which you wish to select.
Multiple adjacent studies	Click a single study, and then hold down the SHIFT key while you click the last study of the range of studies which you wish to select.

4 Click Browse for Folder.

The Browse for Folder dialog box is displayed.



5 In the tree, double-click the drive corresponding to the portable medium to which you wish to export the studies.

6 Double-click folders until you reach the appropriate folder.

7 Click the folder.

8 Click OK.

9 Click Export.

10 Wait until the message 'Export completed' is displayed in the Progress of Export Operation list.

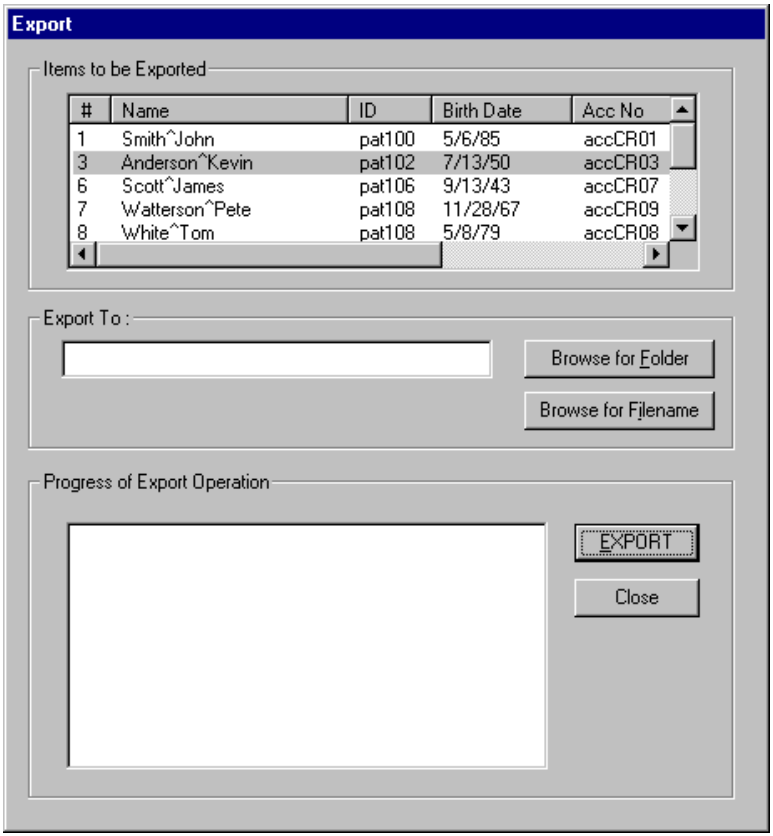
The studies are exported to the selected folder. They are given a default name followed by a sequence number.

11 Click Close.

To export one or more studies with a custom name:

1 Define a search with the appropriate search criteria.
Refer to *'Defining a search'* on page *42*.

2 On the File menu, click Export.
The Export dialog box is displayed.



3 In the Items to be Exported box, select the studies which you wish to export:

To select	Do this
A single study	Click the study.
Multiple nonadjacent studies	Click a single study, and then hold down the CTRL key while you click other studies which you wish to select.
Multiple adjacent studies	Click a single study, and then hold down the SHIFT key while you click the last study of the range of studies which you wish to select.

❖ *If you select several studies, they will be given the custom name followed by a sequence number. If you wish to give each study a different name, export one study at a time.*

4 Click Browse for File Name.

The Browse for File Name dialog box is displayed.

5 In the Look In box, click the drive corresponding to the portable medium to which you wish to export the studies.

6 In the folder list, double-click folders until you open the appropriate folder.

7 In the File Name box, type a file name.

8 Click Select.

9 Click Export.

The studies are exported to the selected folder. They are given the custom file name followed by a sequence number.

10 If you wish to export several studies each with a custom name, click a study in the items to be Exported box, and repeat steps **4** to **9**.

11 Click Close.

Exporting the study or image data to a Rislink file

The IPD Viewer Software allows you to export the study data or image data to a Rislink file. In the former case, the study data, i.e. the data relating to the study as a whole, are saved; in the latter case, the data relating to the image are saved. The Rislink file can easily be imported in the ID Software and thus allows for easy and quick identification of studies of previously examined patients.

The Rislink file contains the data of a study or a single image in ASCII format. Each item is contained in one line and is preceded by the corresponding DICOM (Digital Imaging and Communication in Medicine) code. The first line of the Rislink file states the DICOM version.

Example

```
0019,1001,V1
0010,0010,Anderson^Kevin
0010,0020,pat102
0010,0030,19500713
0010,0040,M
0008,0050,accCR03
0008,1060,
0008,1030,LOWER EXTREMITIES
0020,0010,srdCR03
0008,0020,19990420
0008,0030,110500
0008,0090,Bobby Black
0020,000D,1.3.51.0.7.63391.633919990420.6339110052
0008,1040,AGFA ADC2
0019,1060,3
```

To export the study or image data to a Rislink file:

1 Select the study or the image for which you wish to export the data.

Refer to *'Selecting a study'* on page *54* and *'Selecting an image'* on page *56* respectively.

2 On the File menu, click Create Rislink File.

The Create Rislink File dialog box is displayed.

3 In the Save In box, click the drive or folder to which you wish to export the data.

You can select either a portable medium, a local drive or a local directory.

4 In the folder list, double-click folders until you open the appropriate folder.

5 In the File Name box, type a file name.

6 Click Save.

The study or image data are exported to a Rislink ASCII file with the extension .ris.

Chapter 3

Viewing studies (Viewer mode)

This chapter covers the functions which are available in Viewer mode:

- ❑ Viewing a study for on-screen diagnosis
- ❑ Selecting an on-screen presentation
- ❑ Navigating in Viewer mode
- ❑ Protecting a study
- ❑ Processing an image
- ❑ Transforming an image
- ❑ Adding annotations to an image
- ❑ Deleting an image
- ❑ Consulting study information
- ❑ Making a study report
- ❑ Marking images as the study summary
- ❑ Saving an image

- ❑ Printing a study
- ❑ Transmitting a study
- ❑ Re-routing print or transmit jobs
- ❑ Archiving and retrieving a study
- ❑ Importing a study
- ❑ Exporting a study or an image
- ❑ Exporting the image data to a Rislink file

Viewing a study for on-screen diagnosis

The Viewer mode allows you to view studies and offers you a range of interactive image processing and diagnosis-assisting functions such as:

- Changing the global contrast and intensity of an image (window/level).
- Changing the study type related processing (basic MUSICA processing).
- Adjusting the image processing parameters (advanced MUSICA processing).
- Collimating an image.
- Rotating an image.
- Zooming in/out on an image.
- Adding annotations to an image (lines, arrows, geometric forms, texts, etc.).
- Performing distance and angle measurements on images.
- Performing scan average level (SAL) and density profile calculations on images.
- Printing a study.
- Transmitting a study.

The most straightforward way to view a study in Viewer mode is to first select one or more studies in Selector mode and then switch to Viewer mode. All studies which you have selected in Selector mode will be available in the navigation bar in Viewer mode, allowing for easy navigation.

❖ *In Viewer mode, you can also easily access the studies which you have retrieved from the database. They are available in the worklist in Viewer mode. Refer to 'Navigating through retrieved studies' on page 105.*

To view a study:

1 Select one or more studies in Selector mode.

Refer to *'Selecting a study'* on page *54*.

2 To switch to Viewer mode, do one of the following:

- On the File menu, click View Studies.
- Click the View Studies button on the Switch toolbar.

If you have selected only one study, you can also do one of the following:

- Double-click the study in the list view pane.
  Refer to *'Showing/hiding the list view pane'* on page *36*.
- Double-click a thumbnail of the study in the thumbnail pane.
  Refer to *'Showing/hiding the thumbnail pane'* on page *37*.

All studies which you have selected in Selector mode are available in the navigation bar in Viewer mode. You can switch between the images of the study under examination or between studies. Refer to *'Navigating in Viewer mode'* on page *96*.

3 To optimize the ADC QS Station for on-screen diagnosis, select an appropriate on-screen presentation.

Refer to *'Selecting an on-screen presentation'* on page *89*.

➤ The IPD Viewer Software allows you to interactively process an image, transform it or add annotations. Refer to *'Processing an image'* on page *110*, *'Transforming an image'* on page *135*, and *'Adding annotations to an image'* on page *144* respectively.

Selecting an on-screen presentation

The IPD Viewer Software allows you to customize the Viewer mode according to your needs. You can select an appropriate format for the image pane, allowing you to compare images. Additionally, you can view studies either:

- With the study overview pane turned on.
  The study overview pane displays the images of the study under examination as thumbnails.
- With the study overview pane turned off.

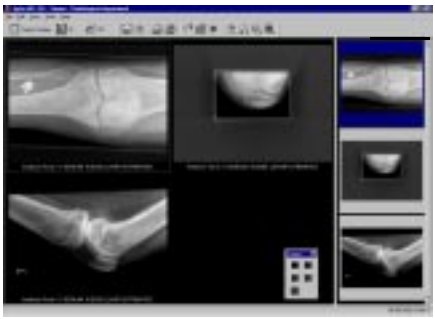


Image pane with 4 images and study overview pane turned on

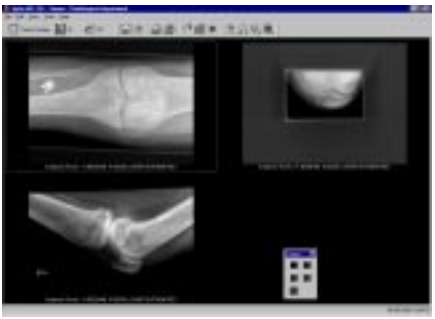


Image pane with 4 images and study overview pane turned off

You can view images with or without the image demographic data and/or the dose which was used to make the image.

- In full screen mode.
  To take full advantage of the monitor of the ADC QS Station for on-screen diagnosis, you can view a study in full screen size.

Showing/hiding the study overview pane

The study overview pane displays the thumbnails of the study under examination. It can be turned on or off. If the study overview pane is turned on, you can display the thumbnail demographic data.

To turn the study overview pane on or off:

On the View menu, click Study Overview.

A check mark means that the study overview pane is turned on.

Showing/hiding the thumbnail demographic data

If the study overview pane is turned on, you can turn the demographic data displayed below the thumbnail images on or off.

To turn the thumbnail demographic data on or off:

On the View menu, click Thumbnail Demographics.

A check mark means that the thumbnail demographic data are turned on.

➤ To configure which data are displayed as thumbnail demographic data, refer to *'Configuring the thumbnail demographic data'* on page *196*.

Showing/hiding the image demographic data

You can turn the demographic data displayed below the image(s) in the image pane on or off.

To turn the image demographic data on or off:

On the View menu, click Image Demographics.

A check mark means that the image demographic data are turned on.

➤ To configure which data are displayed as image demographic data, refer to *'Configuring the image demographic data'* on page *198*.

Showing/hiding the dose monitoring bar

Below each image, you can display a bar which indicates the dose which was used to make the image.

Selecting a format for the image pane

In Viewer mode, you can choose between different formats for the image pane. This allows you to easily compare the images of a study.

You can select from the following formats:

- Single image mode.
  In single image mode, the image pane contains one image. This image is the active image on which image operations can be carried out.
- Multiple image mode:
  You can simultaneously view either: two images in portrait orientation, two images in landscape orientation, four images, or nine images.

To select a format:

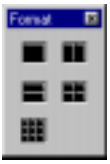
1 View the study which you wish to examine.

Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

2 On the Tools menu, click Format.

Alternatively, you can click the Format button on the Standard toolbar.

The Format toolbar is displayed.



3 Click the button corresponding to the format you wish to use:

To	Click
View one image at a time	
View two images of the study in portrait format	
View two images of the study in landscape format	
View four images of the study	
View nine images of the study	

One image in the image pane is the active image. The active image has a dotted border.

➤ To navigate through the images of a study, refer to *'Navigating through the images of a study'* on page *99*.

Viewing a study in full screen mode

To take full advantage of the monitor of the ADC QS Station for on-screen diagnosis, you can view a study in full screen size.

Navigating in Viewer mode

In Viewer mode, there are three basic ways of navigating. You can either:

- Navigate through the studies which you have retrieved from the database.
- Navigate through the studies which you have retrieved from the database and subsequently selected.
- Navigate through the studies of a favorite search.

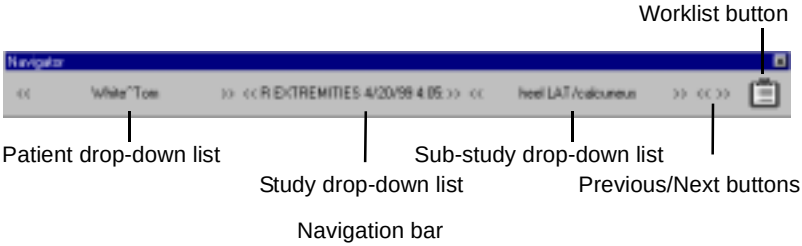
With the navigation bar, you can easily navigate through studies in Viewer mode. The drop-down lists provide a quick way to switch to studies which you have selected in Selector mode. The Worklist button provides quick access to the studies which you have retrieved from the database and to favorite studies.

If you have modified an image, the program will automatically save your changes. No message is displayed, unless the Save Confirmation Option is set (Refer to 'Setting the Show Save Confirmation' on page 78 of the Online Processing Software Reference manual).

If the IPD Viewer Software is configured to retrieve related prior studies, you can show or hide prior studies in the worklist.

Showing/hiding the navigation bar

Via the navigation bar, you can easily navigate in Viewer mode without switching to Selector mode. The navigation bar also provides at-a-glance information about the study under examination.



To turn the navigation bar on or off:

On the View menu, click Navigation Bar.

A check mark means that the navigation bar is turned on.

❖ *Via the Worklist button on the navigation bar, you can access the list of studies which you have retrieved from the database in Selector mode and the list of favorites. Refer to 'Navigating through retrieved studies' on page 101 and 'Navigating through favorite studies' on page 107.*

Showing/hiding related prior studies in the worklist

Related prior studies are previously performed studies which are related to the study you are presently working with. The IPD Viewer Software can be configured to retrieve related prior studies when you search the database.

If the IPD Viewer Software is configured to retrieve related prior studies, you can show or hide prior studies in the worklist.

➤ For information on configuring the IPD Viewer Software to retrieve related prior studies, refer to the Reference manual of the Configuration Viewer.

Navigating through selected studies

Via the navigation bar, you can easily navigate through the studies which you have retrieved from the database and selected. You can either:

- Navigate through the images of the study under examination.
- Switch to one of the other studies of the same patient which you have selected in Selector mode.
- Switch to a study of one of the other patients which you have selected in Selector mode.
- Browse through the images of the studies which you have selected in Selector mode.

Navigating through the images of a study

Whether you are working in single image or in multiple image mode, you can easily navigate through the images of the study under examination.

- In single image mode, one image is displayed in the image pane. This is the active image on which you can perform image processing and diagnosis-assisting operations.
- In multiple image mode, several images are displayed in the image pane. One image is the active image on which you can perform image processing and diagnosis-assisting operations. This image has a dotted border.

➤ You can also browse through the images of the selected studies. Refer to *'Browsing through the images of selected studies'* on page *104*.

To navigate through the images of a study in single image mode:

1 View the study which you wish to examine.

Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

2 Turn on the navigation bar.

Refer to *'Showing/hiding the navigation bar'* on page *97*.

3 To make an image active, do one of the following:

- If the study overview pane is turned on, click the thumbnail of the image.
- Click the image in the Sub-study drop-down list of the navigation bar.
  Alternatively, you can use the arrow buttons left and right of the Sub-study drop-down list.

The navigation bar gives at-a-glance information about the study under examination and the active image.

If you have modified an image, the program will automatically save your changes. No message is displayed, unless the Save Confirmation Option is set (Refer to 'Setting the Show Save Confirmation' on page 78 of the Online Processing Software Reference manual).

To navigate through the images of a study in multiple image mode:

1 View the study which you wish to examine.

Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

2 Turn on the study overview pane.

Refer to *'Showing/hiding the study overview pane'* on page *90*.

3 Drag the images from the study overview pane to the image pane.

One image in the image pane is the active image. The active image has a dotted border.

4 To make an image the active image, click the image in the image pane.

If you have modified an image, the program will automatically save your changes. No message is displayed, unless the Save Confirmation Option is set (Refer to 'Setting the Show Save Confirmation' on page 78 of the Online Processing Software Reference manual).

Switching between studies of a patient

In Viewer mode, you can easily switch to one of the other studies of a patient which you have selected in Selector mode.

➤ You can also browse through the images of the selected studies. Refer to *'Browsing through the images of selected studies'* on page *104*.

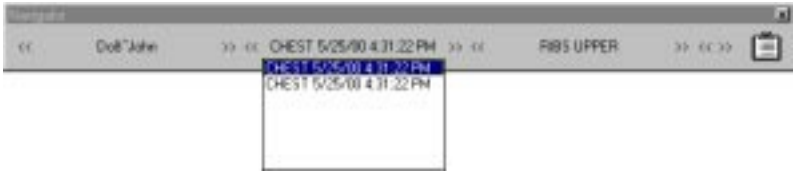
To view a selected study of the same patient:

1 Turn on the navigation bar.

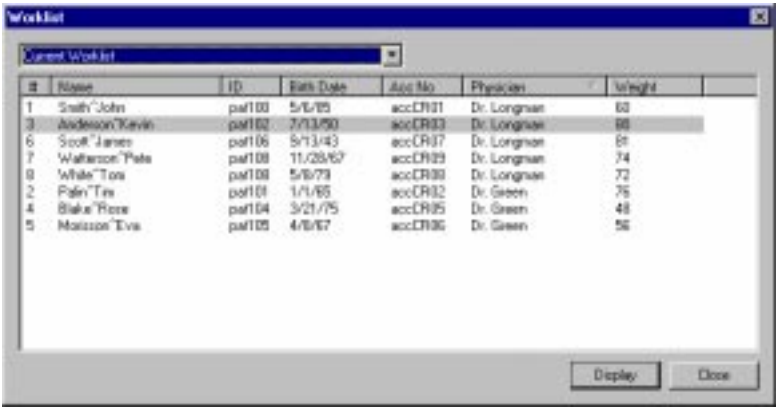
Refer to *'Showing/hiding the navigation bar'* on page *97*.

2 To switch to the study, do one of the following:

- Click the study in the Study drop-down list of the navigation bar.
  Alternatively, you can use the arrow buttons left and right of the Study drop-down list.



- Click the Worklist button on the navigation bar. In the Worklist dialog box, click the study in the current worklist and click Display.



➤ To navigate through the images of the study, refer to *'Navigating through the images of a study'* on page *99*.

Switching between patients

In Viewer mode, you can easily switch to one of the other patients which you have selected in Selector mode. To do so, first switch to the patient of your choice, and then to the desired study.

➤ You can also browse through the images of the selected studies. Refer to *'Browsing through the images of selected studies'* on page *104*.

To view a selected study of another patient:

1 Turn on the navigation bar.

Refer to *'Showing/hiding the navigation bar'* on page *97*.

2 Click the patient in the Patient drop-down list of the navigation bar.

Alternatively, you can use the arrow buttons left and right of the Patient drop-down list.

3 Switch to the study of the patient.

Refer to *'Switching between studies of a patient'* on page *101*.

➤ To navigate through the images of the study, refer to *'Navigating through the images of a study'* on page *99*.

Browsing through the images of selected studies

Via the navigation bar, you can sequentially browse through the images of the studies which you have selected in Selector mode. By browsing you make one image the active image. On the active image, you can perform image processing and diagnosis-assisting operations.

To browse through the images of selected studies:

1 Turn on the navigation bar.

Refer to *'Showing/hiding the navigation bar'* on page *97*.

2 Do one of the following:

- Click the Previous or Next button on the navigation bar:

To	Click
Make the previous image active	The Previous button.
Make the next image active	The Next button.

- Press the arrow keys on the keyboard:

To	Press
Make the previous image active	The LEFT ARROW key.
Make the next image active	The RIGHT ARROW key.
Make the first image of the previous study active	The UP ARROW key.
Make the first image of the next study active	The DOWN ARROW key.

The navigation bar gives at-a-glance information about the study under examination and the active image.

Navigating through retrieved studies

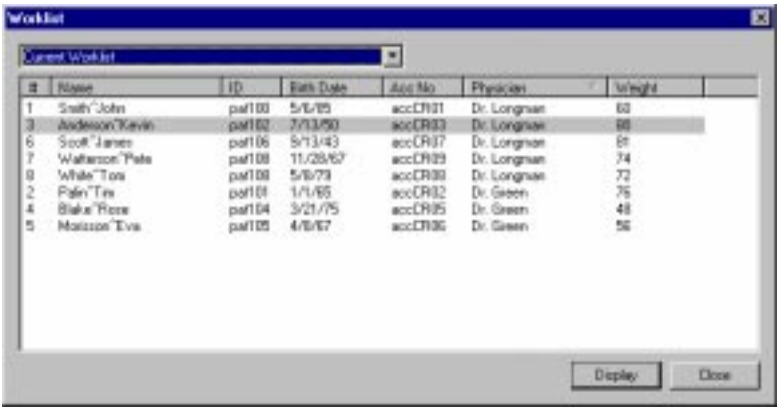
In Viewer mode, you can navigate through the studies which you have retrieved from the database. You can do this via the Worklist button on the navigation bar. This provides a quick way of navigating without switching to Selector mode.

To navigate through retrieved studies:

1 On the Tools menu, click Worklist.

Alternatively, you can click the Worklist button on the navigation bar.

The Worklist dialog box is displayed.



2 Select one or more studies in the current worklist:

To select	Do this
A single study	Click the study.
Multiple nonadjacent studies	Click a single study, and then hold down the CTRL key while you click other studies which you wish to select.
Multiple adjacent studies	Click a single study, and then hold down the SHIFT key while you click the last study of the range of studies which you wish to select.

3 Click Display.

The selected studies are available in the navigation bar.

4 Navigate through the selected studies.

Refer to *'Navigating through selected studies'* on page *99*.

➤ To include related prior studies in the worklist of the navigation bar, refer to *'Showing/hiding related prior studies in the worklist'* on page *98*.

Navigating through favorite studies

In Viewer mode, you can easily view the studies of a specific favorite. You do not need to switch to Selector mode.

- ❖ *If you have defined several groups, you can only navigate through the favorites of the selected group. If you wish to navigate through favorites of another group, you must first select the appropriate group in the favorites pane. Refer to 'Selecting a group of favorites' on page 49.*

To navigate through favorite studies:

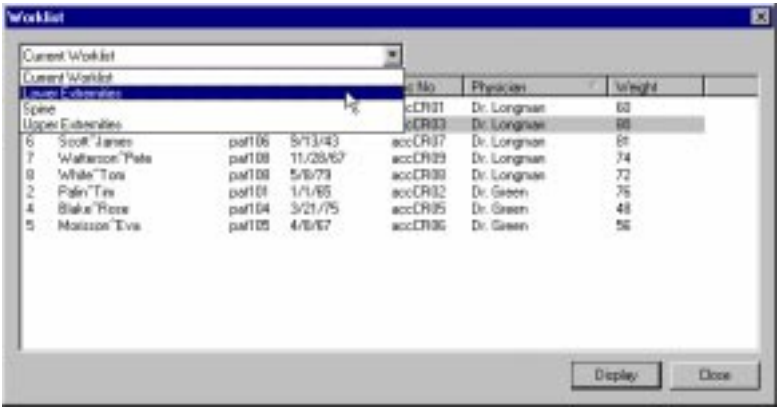
1 On the Tools menu, click Worklist.

Alternatively, you can click the Worklist button on the navigation bar.

The Worklist dialog box is displayed.

2 Click the favorite in the drop-down list.

All studies corresponding to the favorite are displayed in the Worklist dialog box.



3 Select one or more studies of the favorite:

To select	Do this
A single study	Click the study.
Multiple nonadjacent studies	Click a single study, and then hold down the CTRL key while you click other studies which you wish to select.
Multiple adjacent studies	Click a single study, and then hold down the SHIFT key while you click the last study of the range of studies which you wish to select.

4 Click Display.

The selected studies are available in the navigation bar.

5 Navigate through the selected studies.

Refer to *'Navigating through selected studies'* on page *99*.

➤ To include related prior studies in the worklist of the navigation bar, refer to *'Showing/hiding related prior studies in the worklist'* on page *98*.

Protecting a study

Studies are stored on the hard disk of the ADC QS Station. However, as the capacity of the hard disk is limited, only a certain number of studies can be stored. As the used space of the hard disk reaches the full capacity, the data of the oldest studies are automatically deleted and replaced with data from recent studies. You can, however, protect a study against automatic removal.

To protect a study:

1 View the unprotected study which you wish to protect.

Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

A study is unprotected if the Protect button on the Standard toolbar is not pressed.

2 On the File menu, click Mark as Protected.

Alternatively, you can click the Protect button on the Standard toolbar.

The Protect button is pressed: the study is protected.

To remove the protection from a study:

1 View the protected study from which you wish to remove the protection.

Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

A study is protected if the Protect button on the Standard toolbar is pressed.

2 On the File menu, click Mark as Protected.

Alternatively, you can click the Protect button on the Standard toolbar.

The Protect button is in its normal state: the study is unprotected.

Processing an image

The IPD Viewer Software allows you to perform the following interactive image processing operations:

- Displaying the histogram and the sensitometric curve.
- Changing the global contrast and intensity of an image (window/level).
- Changing the study type related processing (basic MUSICA processing), i.e. post-processing an image using different study/exposure parameters.
- Adjusting the image processing parameters (advanced MUSICA processing), i.e. adjusting edge contrast, reducing noise, etc.
- Inverting an image.
- Displaying image saturation due to overexposure.
- Collimating an image.
- Applying shutters around a region of interest (ROI).
- Extracting a region of interest (ROI).

You can access the above interactive image processing functions via the buttons on the Image Processing toolbar.

Image Processing toolbar

	Window/Level button		Polygonal Collimation button
	Revert button		Manual Collimation button
	Histogram button		Automatic Collimation button
	MUSICA button		Collimation On/Off button
	Invert button		Collimation Border button
	Saturation button		Rectangular Shutter button
	Burn button		Circular Shutter button
	Rectangular Collimation button		Extract ROI button
	Circular Collimation button		

Displaying the histogram and the sensitometric curve

A histogram is a graph of the gray scale distribution in an image. The horizontal axis indicates the gray scales, from light on the left to dark on the right. The vertical axis indicates the number of pixels per gray value.

In Viewer mode, images are displayed as if they were printed on a specific film type. The corresponding sensitometric curve can be displayed in the WL/Histogram window. The WL/Histogram window also gives numeric values for the global contrast and intensity of the image.

To display the histogram and the sensitometric curve:

1 Make the image of which you wish to display the histogram and sensitometric curve the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

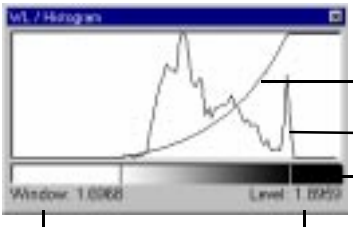
2 On the Tools menu, click Image Processing.

Alternatively, you can click the Image Processing button on the Standard toolbar.

The Image Processing toolbar is displayed.

3 Click the Histogram button.

The WL/Histogram window is displayed.



The global contrast value (window) of the image is given in the lower left corner of the window; the global intensity value (level) in the lower right corner.

➤ To change the sensitometric curve, refer to *'Adjusting the image processing parameters (advanced MUSICA processing)'* on page *120*.

➤ To change the global contrast and intensity, refer to *'Changing the global contrast and intensity of an image (window/level)'* on page *114*.

Changing the global contrast and intensity of an image (window/level)

In Viewer mode, you can manually adjust the global contrast and the intensity of an image. Even if you save changes to the global contrast and intensity, you can at any time revert to the original image.

❖ *When you wish to adjust the global contrast and intensity, it is advised to turn on image saturation (burn), especially if you will print the image. Refer to 'Displaying image saturation due to contrast and intensity adjustment' on page 116.*

❖ *You can consult numerical information concerning the global contrast and intensity via the WL/Histogram window. Refer to 'Displaying the histogram and the sensitometric curve' on page 112.*

To adjust the global contrast and intensity:

1 Make the image which you wish to adjust the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 Do one of the following:

- Double-click the image.
- Click the Window/Level button on the Standard toolbar.

- On the Tools menu, click Image Processing. On the Image Processing toolbar, click the Window/Level button.

- Click the right mouse button anywhere in the image and then click Window/Level on the shortcut menu.

The pointer is now a hand in a square.

3 Use the mouse to adjust the global contrast and intensity:

	To	Do this
Contrast	Increase the global contrast	Move pointer away from you.
	Decrease the global contrast	Move pointer towards you.
Intensity	Increase the global intensity	Move pointer to the right.
	Decrease the global intensity	Move pointer to the left.

The contrast and intensity are adjusted as you move the pointer.

4 When the desired contrast and intensity have been reached, click in the image pane.

5 To save the changed image, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Displaying image saturation due to contrast and intensity adjustment

If you wish to adjust the global contrast of an image, it is useful to turn on image saturation (burn). Due to excessive adjustment of the contrast or the intensity, some parts of the image can become saturated, i.e. 100% white or 100% black. If burn is turned on, the saturated parts of the image will be inverted, i.e. white is displayed as black and vice versa. This allows you to easily see whether parts of the image are saturated due to contrast and intensity adjustment.

- *Because saturation shows up more distinctly on film, the burn function is especially useful if you are adjusting the global contrast of an image which you will print.*

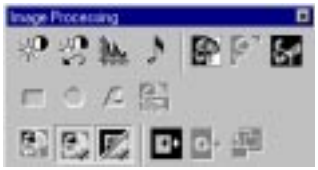
- *The burn function only displays image saturation due to contrast and intensity adjustment. To display image saturation due to overexposure of the image plate, refer to 'Displaying image saturation due to overexposure' on page 125.*

To turn on the burn function:

1 On the Tools menu, click Image Processing.

Alternatively, you can click the Image Processing button on the Standard toolbar.

The Image Processing toolbar is displayed.



2 Click the Burn button.

Saturated parts of the image are inverted.

Reverting to the original image

Even if you have saved changes to the global contrast and intensity, you can at any time revert to the original image.

To revert to the original image:

1 On the Tools menu, click Image Processing.

Alternatively, you can click the Image Processing button on the Standard toolbar.

The Image Processing toolbar is displayed.

2 Click the Revert button.

The original image is displayed as the active image.

Changing the study type related processing (basic MUSICA processing)

Basic MUSICA processing (MUSICA: Multi-Scale Image Contrast Amplification) consists in post-processing an image using a different study group, study type, sub-study type, and/or exposure type. This allows you to re-process an image which has been associated with wrong study parameters during identification. This feature eliminates the need to retake the exposure.

Changing the study type related processing only affects the image processing; it does not change the study/exposure data of the image. To modify the study/exposure data, refer to 'Consulting study information' on page 174.

To change the study type related processing:

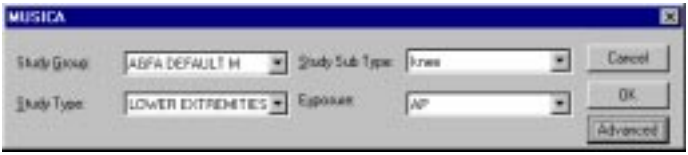
1 Make the image which you wish to post-process the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Tools menu, click MUSICA.

Alternatively, you can click the MUSICA button on the Image Processing toolbar.

The MUSICA dialog box is displayed.



3 In the drop-down lists, click the appropriate study/exposure parameters for:

- Study group,
- Study type,
- Sub-study type,
- Exposure type.

4 Click OK.

The image is reprocessed with the selected study/exposure parameters. It is displayed in the image pane.

5 To save the changed image, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Adjusting the image processing parameters (advanced MUSICA processing)

Via advanced MUSICA processing (MUSICA: Multi-Scale Image Contrast Amplification), you can fine-tune the contrast and intensity of an image. MUSICA offers the possibility to interactively fine-tune the contrast of all features, of short-range features such as edges, or of long-range features. It also allows you to reduce any residual noise in the image and to simulate the exposure on a specific film type.

To interactively adjust the image processing parameters:

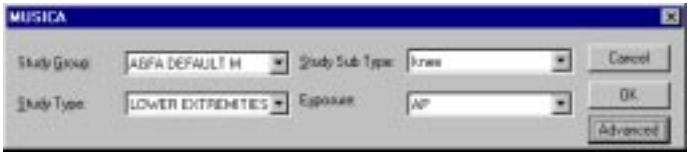
1 Make the image which you wish to process the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

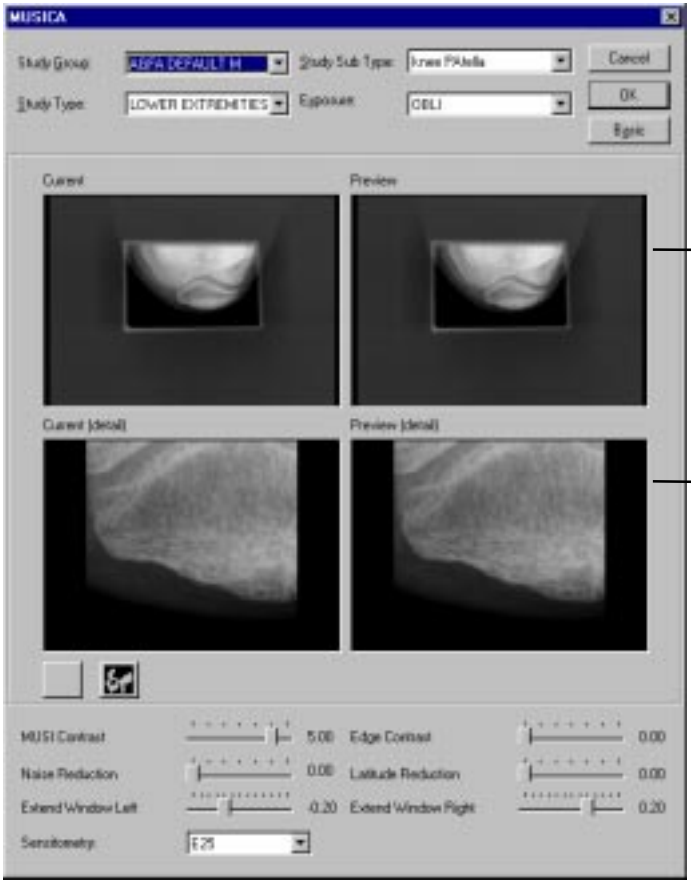
2 On the Tools menu, click MUSICA.

Alternatively, you can click the MUSICA button on the Image Processing toolbar.

The MUSICA dialog box is displayed.



3 Click Advanced to display the advanced MUSICA processing functions.



Advanced MUSICA dialog box

4 Apply the MUSICA parameters according to your preferences:

To		Use
Fine-tune the contrast of all features		MUSI Contrast slider
Fine-tune the contrast of short-range features, including edges ❖ *Use edge contrast enhancement sparingly. Enhancing edge contrast will also enhance noise and may cause artefacts in the image.*		Edge Contrast slider
Reduce noise without affecting the contrast of short-range features such as edges and texture		Noise Reduction slider
Fine-tune the contrast of long-range features		Latitude Reduction slider
Fine-tune the intensity	Make the image darker	Extend Window Left slider
	Make the image lighter	Extend Window Right slider

❖ *Edge contrast and latitude reduction influence the dynamic range of the image. Reducing the dynamic range is useful prior to printing the image on a specific film.*

The effect of the MUSICA processing is shown in real time in the preview images (overview image and detail) of the MUSICA dialog box. You can adjust the zoomed image by dragging the pointer in the Current box. The area which is magnified is marked.

5 To simulate exposure of the image on a specific film, click a film sensitometric curve in the Sensitometry list.

The effect of exposure on a specific film is shown in real time in the preview images (overview image and detail) of the MUSICA dialog box. You can adjust the zoomed image by dragging the pointer in the Current box. The area which is magnified is marked.

6 Quit the MUSICA dialog box:

To	Click
Apply the MUSICA processing parameters and quit	OK
Quit without applying the MUSICA processing parameters	Cancel

7 To save the changed image, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Inverting an image

In Viewer mode, you can display the active image inverted, i.e. white displayed as black, light gray values displayed as the corresponding dark gray values, and vice versa.

To invert an image:

1 Make the image which you wish to invert the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Tools menu, click Image Processing.

Alternatively, you can click the Image Processing button on the Standard toolbar.

The Image Processing toolbar is displayed.

3 Click the Invert button.

The inverted image is displayed in the image pane.

4 To save the inverted image, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Displaying image saturation due to overexposure

Due to local overexposure of the image plate, some parts of the image can be saturated, i.e. 100% black. To check overexposure, you can use the saturation function. If saturation is turned on, the saturated parts of the image will be inverted, i.e. black is displayed as white. This allows you to easily see whether parts of the image are saturated due to overexposure.

Collimating an image

If an image has been made with collimation borders, the borders will influence the automatic image processing, resulting in an image with poor contrast and intensity. However, your ADC Quality System can be configured so that, if studies of certain types have been made with collimation, the IPD Viewer Software will automatically detect the collimation borders and collimate the image accordingly, i.e. reprocess it ignoring the collimation borders. Alternatively, you can manually indicate the collimation borders on the image. If necessary, you can easily revert to the automatically collimated image.

You can choose to view a collimated image in its collimated or uncollimated state. You can display the collimated image either with or without black collimation borders. Black collimation borders facilitate viewing images for diagnosis.

Collimating an image manually

If the automatically collimated image would not satisfy you, you can manually indicate the collimation borders on the image and command the IPD Viewer Software to reprocess the image accordingly. Even if you have saved the manually collimated image, you can easily revert to the automatically collimated image. Refer to *'Collimating an image automatically'* on page *129*.

To collimate an image manually:

1 Make the image which you wish to collimate the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Tools menu, click Image Processing.

Alternatively, you can click the Image Processing button on the Standard toolbar.

The Image Processing toolbar is displayed.

3 Select a form for the collimation area:

To use	Click	Button
A rectangular collimation area	Rectangular Collimation button.	
A circular collimation area	Circular Collimation button.	
A polygonal collimation area	Polygonal Collimation button.	

❖ *The area inside the collimation form will be used as collimation area. If for example, you wish to use a rectangular area, enclose this area in a rectangle. Do not use the collimation form to cover the collimation borders.*

4 Draw the collimation area:

To draw	Do this
A rectangular collimation area	**1** Click once to define one corner. **2** Move the pointer. **3** Click again to define the opposite corner.
A circular collimation area	**1** Click once to define the center. **2** Move the pointer. **3** Click again to define the radius.
A polygonal collimation area	**1** Click to define the starting point. **2** Move the pointer and click to define each corner. **3** To close the polygon, click the starting point.

You can move the collimation area by dragging it. You can resize the area by dragging a sizing handle.

5 Click the Manual Collimation button.

The manually collimated image is displayed in the image pane.

6 To save the manually collimated image, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Collimating an image automatically

During automatic image processing, the IPD Viewer Software will automatically collimate an image which was taken with collimation borders. If you have collimated the image manually, you can always revert to the automatically collimated image.

To revert to the automatically collimated image:

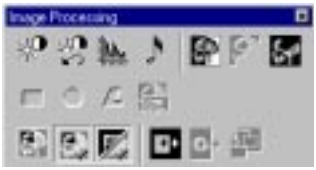
1 Make the image which you wish to collimate the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Tools menu, click Image Processing.

Alternatively, you can click the Image Processing button on the Standard toolbar.

The Image Processing toolbar is displayed.



3 Click the Automatic Collimation button.

The automatically collimated image is displayed in the image pane.

4 To save the automatically collimated image, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Turning collimation on/off

You can choose to view an - either automatically or manually - collimated image in its collimated or uncollimated state.

- ❖ *If you turn off collimation and save the result, the automatically or manually collimated image is not lost. At any time, you can revert to the corresponding collimated image by turning collimation on again.*

To turn collimation on or off:

1 Make the image the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Tools menu, click Image Processing.

Alternatively, you can click the Image Processing button on the Standard toolbar.

The Image Processing toolbar is displayed.

3 Click the Collimation On/Off button.

If the button is in its normal state, the image is uncollimated; if the button is pressed, the image is collimated.

4 To save the image in the current collimation state, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Showing/hiding collimation borders

A collimated image can be displayed either with or without black collimation borders. Black collimation borders facilitate viewing images for diagnosis.

To turn the collimation borders on or off:

1 View the collimated image.

Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

2 On the Tools menu, click Image Processing.

Alternatively, you can click the Image Processing button on the Standard toolbar.

The Image Processing toolbar is displayed.

3 Click the Collimation Border button.

If the button is in its normal state, the collimation borders are turned off. If the button is pressed, the collimation borders are turned on; they are displayed as black regions.

4 To save the changed image, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Applying shutters around a region of interest (ROI)

The IPD Viewer Software allows you to mask non-relevant areas of the image with black borders (shutters).

To apply shutters around one or more regions of interest (ROI):

1 Make the image to which you wish to apply shutters the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Tools menu, click Image Processing.

Alternatively, you can click the Image Processing button on the Standard toolbar.

The Image Processing toolbar is displayed.

3 Select a form for the shutter:

To use	Click	Button
A rectangular shutter	Rectangular shutter button.	

A set of sizing handles is displayed.

4 Drag the sizing handles to mask the non-relevant areas of the image.

The non-relevant areas are covered with black borders.

5 To save the changed image, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

➤ You can also extract the relevant areas of an image and save these as new images. This can reduce image size significantly. Refer to *'Extracting a region of interest (ROI)'* on page *134*.

Extracting a region of interest (ROI)

You can extract the relevant areas of an image and save these as new images. This can reduce image size significantly.

Transforming an image

The IPD Viewer Software allows you to perform the following image transformation operations:

- Rotating an image.
- Flipping an image.
- Zooming in/out on an image.
- Roaming over a zoomed image.
- Magnifying part of an image.

You can access the above image transformation functions via the buttons on the Transformation toolbar.

Transformation toolbar

	Rotate Right button		Rotate Left button
	Rotate 180° button		Flip Horizontally button
	Flip Vertically button		Zoom in button
	Zoom out button		Magnify button
	Roam button		Center button
	Revert button		

Rotating an image

You can rotate an image 90° clockwise, 90° anti-clockwise, or 180°.

To rotate an image:

1 Make the image which you wish to rotate the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Tools menu, click Transformation.

Alternatively, you can click the Transformation button on the Standard toolbar.

The Transformation toolbar is displayed.

3 Rotate the image:

To	Click	Button
Rotate 90° clockwise	Rotate Right button.	
Rotate 90° anti-clockwise	Rotate Left button.	
Rotate 180°	Rotate 180° button.	

The rotated image is displayed in the image pane.

4 To save the rotated image, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Flipping an image

You can flip an image around the horizontal or around the vertical axis.

To flip an image:

1 Make the image which you wish to flip the active image.
Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Tools menu, click Transformation.
Alternatively, you can click the Transformation button on the Standard toolbar.

The Transformation toolbar is displayed.

3 Flip the image:

To	Click	Button
Flip around the horizontal axis	Flip Horizontally button.	
Flip around the vertical axis	Flip Vertically button.	

The flipped image is displayed in the image pane.

4 To save the flipped image, either replace the existing image or save the changed image as a new image.
Refer to *'Saving an image'* on page *178*.

Zooming in/out on an image

In Viewer mode, you can zoom in or out on an image. You can move the zoomed image within the image cell (roaming) and save the zoomed image. With a single click, you can center the zoomed image in the image pane. Even if you have saved the image after zooming and/or roaming, you can always revert to the original image.

To zoom in or out:

1 Make the image on which you wish to zoom in/out the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Tools menu, click Transformation.

Alternatively, you can click the Transformation button on the Standard toolbar.

The Transformation toolbar is displayed.

3 Zoom in or out:

To	Click	Button
Zoom in	Zoom In button.	
Zoom out	Zoom Out button.	

❖ *You cannot zoom out beyond the zoom level of the original image.*

Alternatively, you can use a thumbweel mouse to zoom in or out continuously.

4 To zoom more in or out, repeat step **3**.

5 To save the zoomed image, either replace the existing image or save the changed image as a new image.
Refer to *'Saving an image'* on page *178*.

➤ You can move the zoomed image in the image cell. Refer to *'Roaming over a zoomed image'* on page *140*.

➤ To revert to the original image, refer to *'Reverting to the original image'* on page*142*.

Roaming over a zoomed image

The Viewer mode allows you to roam over a zoomed image, i.e. move the zoomed image within the image cell.

To roam over a zoomed image:

1 Make the image the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 Zoom in on the image.

Refer to *'Zooming in/out on an image'* on page *138*.

3 Click the Roam button.

The pointer is now a cross.

4 Drag the pointer in the image cell to move the image to the desired position.

5 To save the image after roaming, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

➤ To center the image after roaming, refer to *'Centering an image after roaming'* on page *141*.

Centering an image after roaming

If you have roamed over a zoomed image, you can easily center the zoomed image in the image cell, even if you have saved the image.

To center an image:

1 On the Tools menu, click Transformation.

Alternatively, you can click the Transformation button on the Standard toolbar.

The Transformation toolbar is displayed.

2 Click the Center button.

The zoomed image is centered in the image cell.

Reverting to the original image

After you have zoomed in or out on an image, or roamed over a zoomed image, you can easily revert to the original image; i.e. the image in its original zoom level and displayed in the center of the image cell.

To revert to the original image:

1 On the Tools menu, click Transformation.

Alternatively, you can click the Transformation button on the Standard toolbar.

The Transformation toolbar is displayed.

2 Click the Revert button.

The image is displayed in its original size and centered in the image cell.

Magnifying part of an image

Via the IPD Viewer Software, you can selectively magnify part of an image. You can drag the magnifying glass over the image to inspect different image zones.

To magnify part of an image:

1 Make the image the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Tools menu, click Transformation.

Alternatively, you can click the Transformation button on the Standard toolbar.

The Transformation toolbar is displayed.

3 Click the Magnify button.

A rectangular magnifying window is displayed.

4 To magnify a particular area, drag the magnifying glass to the area.

5 To turn off the magnifying glass, click the Magnify button again.

Adding annotations to an image

The IPD Viewer Software allows you to add annotations to images and to perform measurements. You can:

- Measure distances.
- Calibrate distances.
- Measure angles.
- Calculate the scan average level within a region of interest (ROI).
- Calculate density profiles.
- Draw lines.
- Draw arrows.
- Draw geometric forms (rectangles, ellipses, polygons).
- Add custom texts and predefined texts.

As an aid when performing measurements or calculations or when adding annotations, you can display grid lines on the image.

❖ *Annotations can be shown or hidden.*

You can access the above annotation functions via the buttons on the Annotation toolbar

Annotation toolbar

	Select button		Delete button
	Distance button		Angle button
	Line Calibration button		Circular Calibration button
	Revert Calibration button		
	Line button		Arrow button
	Rectangle button		Circle button
	Polygon button		Grid button
	Density Profile button		Rectangular ROI button
	Circular ROI button		Polygonal ROI button
	Text button		Predefined Text button
		Predefined Text box	

Showing/hiding annotations

If annotations have been added to an image, you can choose to show or hide the annotations.

- *Turn on annotations before adding annotations or performing measurements or calculations.*

- *If you turn off annotations and save the result, the annotations are not lost. At any time, you can turn annotations on again.*

To turn annotations on or off:

On the View menu, click Annotations.

A check mark means that annotations are turned on. If the image has annotations, the image with its annotations is displayed in the image pane.

Showing/hiding grid lines

When you wish to add annotations to an image or perform measurements, it can be useful to display grid lines on the image.

To turn grid lines on:

1 Make sure annotations are turned on.

Refer to *'Showing/hiding annotations'* on page *146*.

2 On the Tools menu, click Annotation.

Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

3 Click the Grid button.

The Grid Spacing dialog box is displayed.

4 Type the grid spacing.

The regional settings of your ADC QS Station determine the unit of length.

5 Click OK.

Grid lines are displayed.

To turn grid lines off:

1 On the Tools menu, click Annotation.

Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

2 Click the Grid button.

Grid lines are hidden.

Measuring a distance

Via the Annotation toolbar, you can measure the distance between specific features in an image. If you have not calibrated the distance measurement using a reference object in the image, the measurement is referenced against the image plate dimensions.

❖ *If you wish to use calibrated distance measurements, calibrate first. Refer to 'Calibrating distance measurements' on page 151.*

To measure one or more distances:

1 Make the image on which you wish to measure the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.

Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.

Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Measure the distances:

To	Do this	Button
Measure one distance	Click the Distance button.	
Measure several distances	Double-click the Distance button.	

The pointer is now a standard pointer and a ruler.

5 Click once to define the starting point of the measurement, move the pointer, and click again to define the end.

As you move the pointer, the distance between the starting point and the pointer is displayed. The regional settings of your ADC QS Station determine the unit of length.

After you have clicked to define the end of the measurement, the measured distance is displayed. You can move the distance label by dragging it. You can resize the distance label by dragging a sizing handle of the label.

6 To measure several distances, repeat step **5**.

7 To save the measurement, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

➤ To modify the measured distances, refer to *'Editing an annotation'* on page *169*.

Calibrating distance measurements

You can calibrate distance measurements using either a linear or a circular reference object in the image. At any time, you can revert to the original calibration.

Calibration applies only to the image for which you perform the calibration.

To calibrate distances via line calibration:

1 Make the image with the linear reference object the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.

Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.

Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Click the Line Calibration button.

The Calibration Distance dialog box is displayed.

5 Type the value for the distance which you will use as calibration distance.

The regional settings of your ADC QS Station determine the unit of length.

6 Click OK.

The pointer is now a standard pointer and a ruler with a calibration bar.

7 Click once to define the starting point of the calibration distance, move the pointer, and click again to define the end.

The calibration distance is displayed. You can move the distance label by dragging it. You can resize the distance label by dragging a sizing handle of the label.

All distances which you will measure will be referenced against the calibration distance.

❖ *Previously measured distances are not recalculated.*

8 To save the calibration, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

➤ To modify the calibration distance, refer to *'Editing an annotation'* on page *169*.

To calibrate distances via circular calibration:

1 Make the image with the circular reference object the active image.
Refer to *'Navigating through the images of a study'* on page *99*.

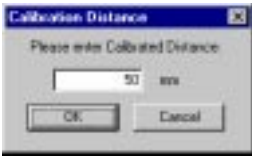
2 Turn on annotations.
Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.
Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Click the Circular Calibration button.

The Calibration Distance dialog box is displayed.



5 Type the value for the diameter of the circle which you will use as calibration distance.

The regional settings of your ADC QS Station determine the unit of length.

6 Click OK.

The pointer is now a standard pointer and a circle with a calibration bar.

7 Click three points on the circumference of the calibration object.

The calibration distance is displayed. You can move the distance label by dragging it. You can resize the distance label by dragging a sizing handle of the label.

All distances which you measure on the present image will be referenced against the calibration distance.

❖ *Previously measured distances are not recalculated.*

8 To save the calibration, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

➤ To modify the calibration distance, refer to *'Editing an annotation'* on page *169*.

Reverting to the original calibration

Even if you have saved changes to the calibration, you can at any time revert to the original calibration which is based on the image plate dimensions.

Measuring an angle

Via the Annotation toolbar, you can measure the angle between two features.

To measure one or more angles:

1 Make the image on which you wish to measure the active image.
Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.
Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.
Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Measure the angles:

To	Do this	Button
Measure one angle	Click the Angle button.	
Measure several angles	Double-click the Angle button.	

The pointer is now a standard pointer and an angle.

5 Click once to define the starting point of the first line, move the pointer, and click again to define the end.

6 Click once to define the starting point of the second line, move the pointer, and click again to define the end.

As you move the pointer, the angle between the two lines is displayed.

After you have clicked to define the end of the second line, the measured angle (<180°) is displayed. You can move the angle label by dragging it. You can resize the angle label by dragging a sizing handle of the label.

7 To measure several angles, repeat steps **5** to **6**.

8 To save the measurement, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

➤ To modify the measured angles, refer to *'Editing an annotation'* on page *169*.

Calculating the scan average level within a region of interest (ROI)

Via the Annotation toolbar, you can calculate the scan average level (SAL) within a rectangular region of interest (ROI).

❖ *To extract regions of interest and discard the non-relevant areas of the image, refer to 'Extracting a region of interest (ROI)' on page 134.*

To calculate the scan average level in one or more regions of interest:

1 Make the image on which you wish to calculate the SAL the active image.
Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.
Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.
Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Select a form for the region of interest:

To mark	Click	Button
A rectangular ROI	Rectangular ROI button.	

5 Mark the region of interest:

To draw	Do this
A rectangular ROI	**1** Click once to define one corner. **2** Move the pointer. **3** Click again to define the opposite corner.

The scan average level (SAL) of the region of interest is displayed. You can move the SAL label by dragging it. You can resize the SAL label by dragging a sizing handle of the label.

6 To calculate the scan average level (SAL) within several regions of interest, repeat steps **4** to **5**.

7 To save the regions of interest and the corresponding SAL values, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

➤ To modify the region of interest, refer to *'Editing an annotation'* on page *169*.

Calculating a density profile

Via the Annotation toolbar, you can calculate the density, i.e. the square root of the exposure, along a line integrated over a rectangular area. If you have not calibrated the distance measurement using a reference object in the image, the length dimensions are referenced against the image plate dimensions.

❖ *If you wish to use calibrated distance measurements, calibrate first. Refer to 'Calibrating distance measurements' on page 151.*

To calculate a density profile:

1 Make the image on which you wish to calculate the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.

Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.

Alternatively, you can click the Annotation button on the Standard toolbar.

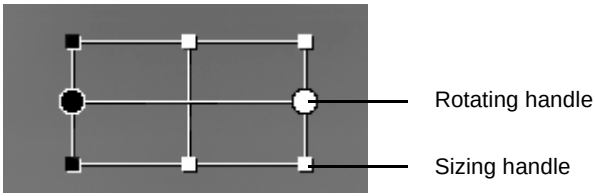
The Annotation toolbar is displayed.

4 Click the Density Profile button.

The blank Density Profile window is displayed.

5 Click in the active image.

The density profile marker is displayed.



6 Position the density profile marker so that it covers the area for which you wish to calculate the density profile.

The density profile will be calculated along the line between the circular rotating handles, integrated over the area inside the density profile marker.

To	Do this
Shift the density profile marker	**1** Move the pointer to the center of the marker. The pointer is now a cross. **2** Drag the marker.
Resize the density profile marker	**1** Move the pointer to a sizing handle of the marker. The pointer is now an arrow. **2** Drag the handle.
Rotate the density profile marker	**1** Move the pointer to a rotating handle of the marker. The pointer is now a curved arrow. **2** Drag the handle.

7 Right-click the density profile marker and then click Recalculate on the shortcut menu.

The density profile is displayed in the Density Profile window.

Drawing a line

You can indicate specific features in an image via lines.

To draw one or more lines:

1 Make the image to which you wish to add lines the active image.
Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.
Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.
Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Draw the lines:

To	Do this	Button
Draw one line	Click the Line button.	
Draw several lines	Double-click the Line button.	

The pointer is now a standard pointer and a line.

5 Click once to define the starting point of the line, move the pointer, and click again to define the end.

6 To draw several lines, repeat step **5**.

7 To save the lines, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

➤ To move or resize lines, refer to *'Editing an annotation'* on page *169*.

Drawing an arrow

You can indicate specific features in an image via arrows.

To draw one or more arrows:

1 Make the image to which you wish to add arrows the active image.
Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.
Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.
Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Draw the arrows:

To	Do this	Button
Draw one arrow	Click the Arrow button.	
Draw several arrows	Double-click the Arrow button.	

The pointer is now a standard pointer and an arrow.

5 Click once to define the tip of the arrow, move the pointer, and click again to define the shaft.

6 To draw several arrows, repeat step **5**.

7 To save the arrows, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

➤ To move or resize arrows, refer to *'Editing an annotation'* on page *169*.

Drawing a geometric form

Via the Annotation toolbar, you can add rectangles, ellipses, or polygons to an image.

To draw one or more geometric forms:

1 Make the image to which you wish to add a geometric form the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.

Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.

Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Select a geometric form:

To draw	Click	Button
A rectangle	Rectangle button.	
An ellipse	Circle button.	
A polygon	Polygon button.	

The pointer is now a standard pointer and a geometric form.

❖ *To draw several geometric forms of the same type, double-click the corresponding button.*

5 Draw the geometric form:

To draw	Do this
A rectangle	**1** Click once to define one corner. **2** Move the pointer. **3** Click again to define the opposite corner.
An ellipse	**1** Click once to define one point. **2** Move the pointer. **3** Click again to define the second point.
A polygon	**1** Click to define the starting point. **2** Move the pointer and click to define each corner. **3** To close the polygon, click the starting point.

6 To save the geometric forms, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

➤ To move or resize geometric forms, refer to *'Editing an annotation'* on page *169*.

Adding text

Via the Annotation toolbar, you can add text to an image. You can either add custom text, or select from a number of predefined texts.

➤ To set predefined texts, refer to *'Setting predefined texts'* on page *216*.

To add text:

1 Make the image to which you wish to add text the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.

Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.

Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Add the text:

To add	Do this
Custom text	**1** Click the Text button.  A text box is displayed. **2** Type the text and press ENTER.
Predefined text	In the Predefined Text box, click the text. 

The pointer is now a standard pointer and an A.

5 Click once to define the center of the text, move the pointer, and click again to define the size.

6 To add several texts, repeat steps **4** to **5**.

7 To save the texts, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Editing an annotation

You can easily modify previously defined annotations. You can:

- Move or resize lines, arrows, geometric forms, or text.
- Modify measured distances and angles as well as distance and angle labels.
- Modify calibration distances and calibration labels.
- Modify regions of interest, update the corresponding scan average levels (SAL) and modify the SAL labels.

To edit an annotation:

1 Make the image of which you wish to edit an annotation the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.

Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.

Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Click the Select button.

5 Click the annotation which you wish to edit.

The annotation is selected. Distance, angle and calibration annotations consist of a marker and a label. Region of interest annotations consist of a region of interest marker and a SAL label. You can edit both the markers and the labels.

6 Edit the marker and/or the label:

To	Do this
Move an item	**1** Move the pointer to the center of the item. The pointer is now a cross. **2** Drag the item.
Resize an item	**1** Move the pointer to a sizing handle of the item. The pointer is now an arrow. **2** Drag the handle.

7 If you have resized a region of interest, right-click it and then click Recalculate on the shortcut menu.

The scan average level (SAL) is updated.

8 To save the edited annotations, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Deleting an annotation

If you wish to definitively remove an annotation, you must delete it.

Once an annotation has been deleted, it can by no means be restored!

❖ *If you wish to temporarily hide all annotations, you can turn off annotations. In that case, the annotations are saved with the image and can be re-displayed at any time. Refer to 'Showing/hiding annotations' on page 146.*

To delete one or more annotations:

1 Make the image of which you wish to delete an annotation the active image.
Refer to *'Navigating through the images of a study'* on page *99*.

2 Turn on annotations.
Refer to *'Showing/hiding annotations'* on page *146*.

3 On the Tools menu, click Annotation.
Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

4 Click the Select button.

5 Click the annotation which you wish to delete.

6 Do one of the following:

- Click the Delete button on the Standard toolbar.
- Click the Delete button on the Annotation toolbar.

- Press the DELETE key.

7 To delete several annotations, repeat steps **4** to **6**.

8 To save your modifications, either replace the existing image or save the changed image as a new image.

Refer to *'Saving an image'* on page *178*.

Deleting an image

In Viewer mode, you can delete single images from the database.

❖ *If you wish to delete several studies, switch to Selector mode. Refer to 'Deleting a study or an image' on page 61.*

Once an image has been deleted, it can by no means be restored!

To delete an image:

1 Make the image which you wish to delete the active image.
Refer to *'Navigating through the images of a study'* on page *99*.

2 On the Edit menu, click Delete.
Alternatively, you can click the Delete button on the Standard toolbar.

A warning message is displayed.

3 To delete the image, click Yes.
The image is deleted from the local database.

Consulting study information

In Selector mode, you can consult detailed information on a particular study. Data include patient-, study- and image information.

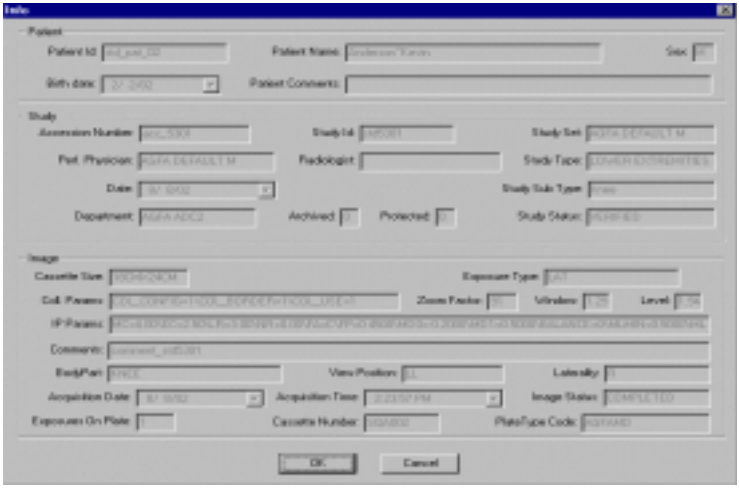
➤ To configure which study data are displayed in the Info dialog box, refer to *'Configuring the study information'* on page *208*.

1 Select the study of which you wish to consult information.

Refer to *'Selecting a study'* on page *54*.

2 On the Tools menu, click Study Information.

Detailed information on the study is displayed.



3 Click OK or Cancel.

Making a study report

In Viewer mode, you can create a study report in electronic format and store this report as part of the study. Once a report has been made, you can consult it via the Viewer.

If you wish to dictate your study reports, you can store an indication when the study has been dictated. This indication is one of the study data. If the hospital has a HIS/RIS (Hospital Information System/Radiology Information System), the indication can be consulted via the HIS/RIS, allowing you to easily keep track of which studies have been dictated.

Making an electronic study report

If you prefer to type study reports yourself, you can easily do this in Viewer mode. While viewing the study and with the annotation and measurement tools immediately available, you can draw up your report.

Marking a study as dictated

If you have dictated a study report, you can mark the study as having been dictated. This information is saved as one of the study data.

❖ *You can also make an electronic study report in Viewer mode. Refer to 'Making a study report' on page 175.*

To mark a study as having been dictated:

1 View the study which you have dictated.

Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

2 On the File menu, click Mark as Dictated.

A check mark means that the study is marked as having been dictated.

❖ *If you have accidentally marked a study as having been dictated, you can unmark the study by selecting it and clicking Mark as Dictated on the File menu.*

Marking images as the study summary

You can select one or more images, either with or without annotations, as being representative for the study. These images are part of the study summary.

Saving an image

If you have modified an image via interactive image processing or transformation or have added annotations, and you wish to save these changes, save the image manually on disk.

To save an image:

1 Make the image the active image.

Refer to *'Navigating through the images of a study'* on page *99*.

2 Perform any interactive processing or transformation operations and/or add annotations.

Refer to *'Processing an image'* on page *110*, *'Transforming an image'* on page *135*, and *'Adding annotations to an image'* on page *144* respectively.

3 Save the image:

To	Do this	Button
Replace the existing image with the changed image	On the File menu, click Save. Alternatively, you can click the Save button on the Standard toolbar.	
Save the changed image as a new image which is added to the study	On the File menu, click Save as New.	–

The image is stored in the local database.

Printing a study

In Viewer mode you can print studies according to your specific needs.

You can either:

- Print using the default layout via Quick Print.
- Print using a non-default or a custom layout via the Print Composer.

Print using the default layout (Quick Print)

Your ADC Quality System can be configured so that each study type is associated with a default printer and a default layout. If for a specific study type no default printer and/or default layout has been configured, the system default printer and/or layout will be considered to be the default.

To print using the default layout on the default printer:

1 View the study which you wish to print.

Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

2 Click the Quick Print button on the Standard toolbar.

Depending on the configuration of your ADC Quality System, the studies or images will be printed on the configured or the system default printer using the configured or the system default layout.

➤ For information on configuring the printers of your ADC Quality System, refer to the Reference manual of the Configuration Viewer.

Printing using a custom layout (Print Composer)

Via the Print Composer, you can print on factory defined layouts or on previously saved custom layouts. You can fully customize the layout of the images on the film.

➤ For information on defining custom layouts, refer to the Reference manual of the Print Composer.

To print using a non-default layout or a custom layout:

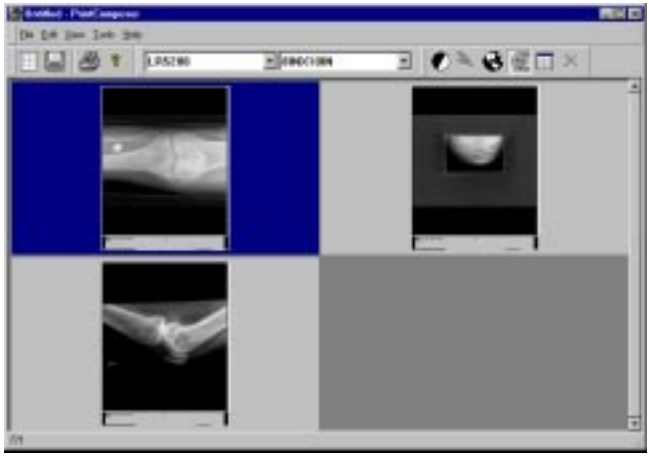
1 View the study which you wish to print.

Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

2 On the File menu, click Print Composer.

Alternatively, you can click the Print Composer button on the Standard toolbar.

The Print Composer main window is displayed.



All images of the study are displayed in the preview of the Print Composer.

3 Set the print options such as the printer, the film format and the film layout.

Refer to the Reference manual of the Print Composer.

4 If you wish to add images, drag them from the study overview pane or the image pane to the preview of the Print Composer.

To	Do this
Add an image to the preview of the Print Composer	Drag the image from the image pane or the study overview pane to the preview.

To	Do one of the following
Remove an image from the preview of the Print Composer	• Drag another image from the image pane or the study overview pane onto the image. • Right-click the image in the preview and then click Delete on the shortcut menu.

5 On the File menu of the Print Composer, click Print.

Alternatively, you can click the Print button on the toolbar of the Print Composer.

The Print dialog box is displayed.

6 Set the print options such as the film range and the number of copies.

Refer to the Reference manual of the Print Composer.

7 Click OK.

Transmitting a study

The IPD Viewer Software allows you to transmit studies from your ADC QS Station to a DICOM station. You can do this to review studies on another station or as a means to manually archive studies.

To transmit a study:

1 View the study which you wish to transmit.

Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

2 On the File menu, click Transmit.

Alternatively, you can click the Transmit button on the Standard toolbar.

The Transmit dialog box is displayed.

3 In the Destination list, click the destination to which you wish to transmit the study.

4 Click Transmit.

The studies or images are saved in the local database of the destination.

Re-routing print or transmit jobs

Your ADC Quality System can be configured so that each study type is associated with a default printer and a default DICOM station. If for a specific study type no default printer or default DICOM station has been configured, the system default printer/ DICOM station will be considered to be the default.

Normally, new studies reaching the ADC QS Station are automatically sent to the default printer and the default DICOM station. However, if e.g. the configured default printer is out of service, you can set another printer to temporarily be the default printer. Similarly, you can re-route transmit jobs to another DICOM station if the configured default DICOM station is out of service.

➤ To configure the default printer or DICOM station for a study type, refer to the Reference manual of the Configuration Viewer.

Archiving and retrieving a study

Studies are stored on the hard disk of the ADC QS Station. However, as the capacity of the hard disk is limited, only a certain number of studies can be stored. As the used space of the hard disk reaches the full capacity, the data of the oldest studies are automatically deleted and replaced with data from recent studies. You can, however, archive studies on a Digital Linear Tape (DLT) nearline storage device for future use.

❖ *Via the Configuration Viewer, you can configure the nearline storage device. For more information, refer to the Reference manual of the Configuration Viewer.*

Archived studies can be retrieved from the nearline storage device and temporarily stored on the hard disk of the ADC QS Station.

Importing a study

Apart from allowing you to work with studies which are stored in the local database of the ADC QS Station, the IPD Viewer Software allows you to import studies from portable media such as writable CD, digital video disc (DVD), magneto-optic disc (MOD), Jaz® drive, etc. provided that your ADC QS Station is equipped with the necessary hardware. The studies are then temporarily added to the database of the ADC QS Station.

You can import either one or more studies of a folder or an entire folder.

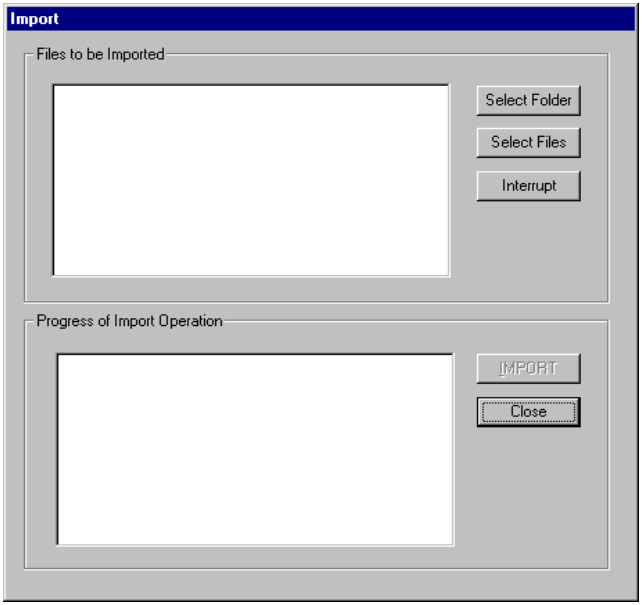
❖ *You can only import studies which have the XML format.*

❖ *The IPD Viewer Software keeps a history file listing the files which have been imported. If you have paused the import operation, this file allows you to easily resume the operation.*

To import one or more studies of a folder:

1 On the File menu, click Import.

The Import dialog box is displayed.



2 Click Select Files.

The Select dialog box is displayed.

3 In the Look In box, click the drive corresponding to the portable medium containing the studies you wish to import.

4 In the folder list, double-click folders until you open the appropriate folder.

5 Select the studies which you wish to import:

To select	Do this
A single study	Click the study.
Multiple nonadjacent studies	Click a single study, and then hold down the CTRL key while you click other studies which you wish to select.
Multiple adjacent studies	Click a single study, and then hold down the SHIFT key while you click the last study of the range of studies which you wish to select.

6 Click Select.

The studies which you have selected are listed in the Files to be Imported list.

7 Click Import.

The progress is indicated in the Progress of Import Operation list.

8 Wait until the message 'Operation completed' is displayed in the Progress of Import Operation list.

9 Click Close.

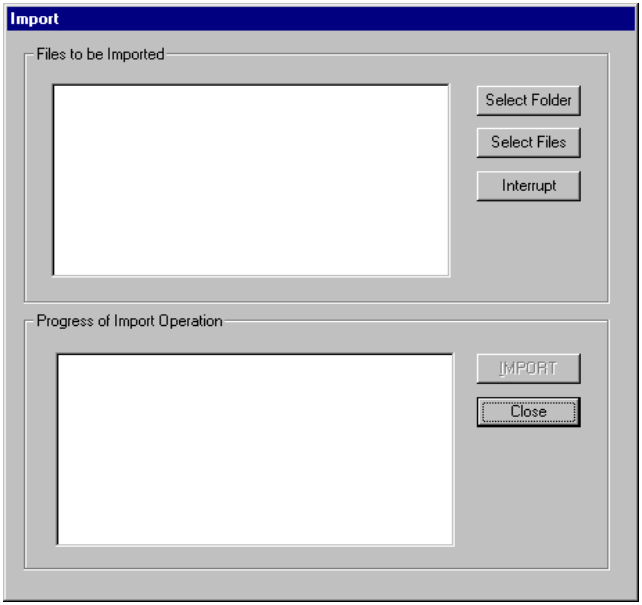
The studies are saved in the local database. If they match the current search criteria as defined in the Selector, they are displayed in the current worklist.

➤ To navigate through the imported studies, refer to *'Navigating through retrieved studies'* on page *105*.

To import all studies of a folder:

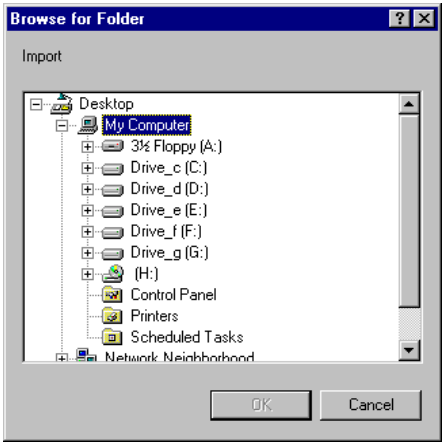
1 On the File menu, click Import.

The Import dialog box is displayed.



2 Click Select Folder.

The Browse for Folder dialog box is displayed.



3 In the tree, double-click the drive corresponding to the portable medium containing the folder which you wish to import.

4 Double-click folders until you reach the appropriate folder.

5 Click the folder.

6 Click OK.

All files in the folder are listed in the Files to be Imported list.

7 Click Import.

The progress is indicated in the Progress of Import Operation list.

8 Wait until the message 'Operation completed' is displayed in the Progress of Import Operation list.

9 Click Close.

The studies are saved in the local database. If they match the current search criteria as defined in the Selector, they are displayed in the current worklist.

➤ To navigate through the imported studies, refer to *'Navigating through retrieved studies'* on page *105*.

Exporting a study or an image

The IPD Viewer Software allows you to save studies or images on portable media such as writable CD, digital video disc (DVD), magneto-optic disc (MOD), Jaz® drive, etc. provided that your ADC QS Station is equipped with the necessary hardware. You can also save images in a local directory on the ADC QS Station.

You can either export the entire study in XML format or export a single image in 8 bit format in one of the following graphical formats: BMP (bitmap), TIFF (Tagged Image File Format), PNG (Portable Network Graphics) and JPEG (Joint Photographic Experts Group).

To export a study or an image:

1 View the study of which you wish to export images.

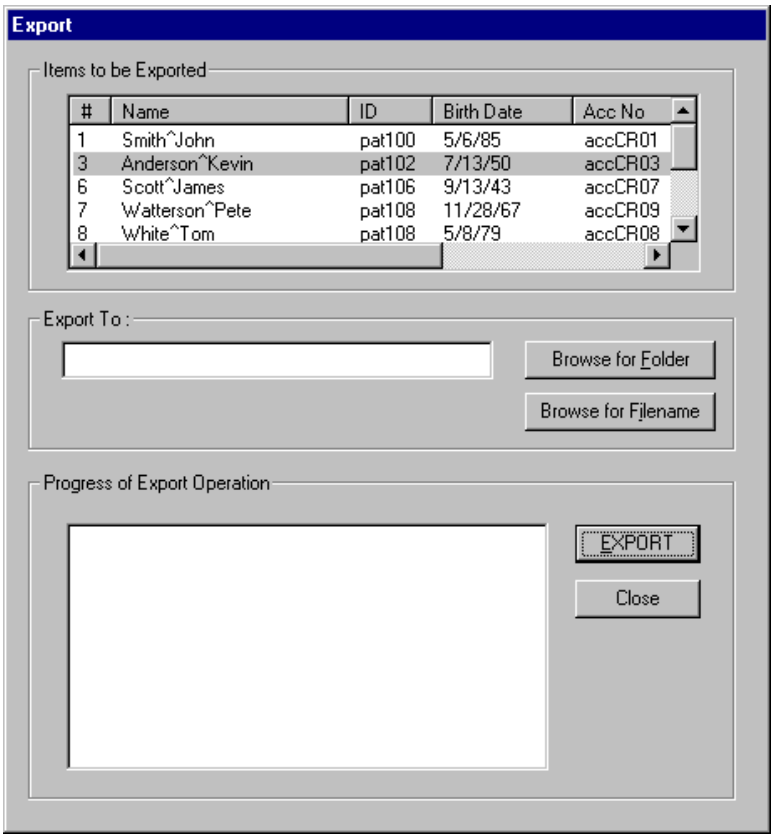
Refer to *'Viewing a study for on-screen diagnosis'* on page *87*.

2 If you wish to export a single image, make the image active.

Refer to *'Navigating through the images of a study'* on page *99*.

3 On the File menu, click Export.

The Export dialog box is displayed.



4 In the Save In box, click the drive or folder where you wish to save the study or image.

You can select either a portable medium or a local directory.

5 In the folder list, double-click folders until you open the appropriate folder.

6 In the File Name box, type a file name.

7 In the Save as type list, enter a file type:

To export	Use file type
An entire study	XML.
A single image	Either: • BMP (bitmap), • TIFF (Tagged Image File Format), • PNG (Portable Network Graphics), • JPEG (Joint Photographic Experts Group).

8 Click Save.

The study or the image is exported to the selected folder.

Exporting the image data to a Rislink file

The IPD Viewer Software allows you to export the image data of a single image to a Rislink file. This file can easily be imported in the ID Software and thus allows for easy and quick identification of studies of previously examined patients.

The Rislink file contains the data of a single image in ASCII format. Each image item is contained in one line and is preceded by the corresponding DICOM (Digital Imaging and Communication in Medicine) code. The first line of the Rislink files states the DICOM version.

Example

```
0019,1001,V1
0010,0010,Anderson^Kevin
0010,0020,pat102
0010,0030,19500713
0010,0040,M
0008,0050,accCR03
0008,1060,
0008,1030,LOWER EXTREMITIES
0020,0010,srdCR03
0008,0020,19990420
0008,0030,110500
0008,0090,Bobby Black
0020,000D,1.3.51.0.7.63391.633919990420.6339110052
0008,1040,AGFA ADC2
0019,1060,3
```

➤ If you wish to export the study data, you must switch to Selector mode. Refer to *'Exporting the study or image data to a Rislink file'* on page *83*.

To export the image data to a Rislink file:

1 Make the image for which you wish to export the data the active image.
Refer to *'Navigating through the images of a study'* on page *99*.

2 On the File menu, click Create Rislink File.
The Create Rislink File dialog box is displayed.

3 In the Save In box, click the drive or folder to which you wish to export the study data.
You can select either a portable medium, a local drive or a local directory.

4 In the folder list, double-click folders until you open the appropriate folder.

5 In the File Name box, type a file name.

6 Click Save.
The image data are exported to a Rislink ASCII file with the extension .ris.

Chapter 4

Customizing the IPD Viewer Software

This chapter explains how to customize the IPD Viewer Software:

- ❑ Configuring the thumbnail demographic data
- ❑ Configuring the image demographic data
- ❑ Customizing the toolbars
- ❑ Configuring the study information
- ❑ Customizing the panes
- ❑ Setting predefined texts

Configuring the thumbnail demographic data

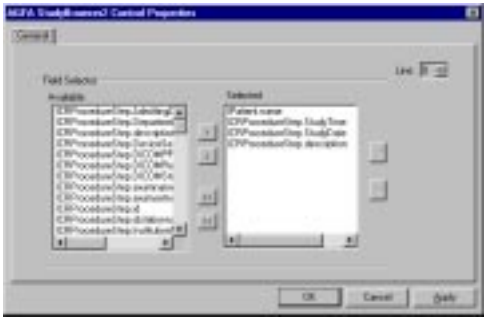
Both in Selector and in Viewer mode, you can configure which study data are displayed as thumbnail demographic data. You can configure the thumbnail demographic data for Selector and Viewer mode independently. The thumbnail demographic data can cover several lines.

To configure the thumbnail demographic data:

1 Turn on the thumbnail demographic data.

Refer to *'Showing/hiding the thumbnail demographic data'* on page *90*.

2 On the Tools menu, point to Customize, and then click Customize Thumbnail Demographics.

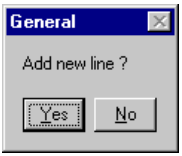


3 Click the General tab.

4 In the Line list box, click the line number of the line where you wish to display the data.

The thumbnail demographic data can cover several lines.

❖ *If you click a line number for which no items have been defined yet, the General dialog box will be displayed. To add a new line, click Yes.*



5 Move the study data which you wish to include in the selected line from the Available list to the Selected list:

To	Do one of the following
Move an item between lists	• Click the item in the Available list and click the arrow button. • Double-click the item in the Available list.

To	Do this
Move all items from one list to another	Click the double arrow button.

6 To define the order of the items in the line, click the item in the Selected list and move it up or down via the Up and Down buttons respectively.

The topmost item in the Selected list will be the first item of the line.

7 To get a preview of the thumbnail demographic data, click Apply.

The thumbnail demographic data is displayed according to the selected layout.

8 Repeat steps **4** to **7** for the other lines of the thumbnail demographic data.

9 To save the layout of the thumbnail demographic data, click OK.

Configuring the image demographic data

You can configure which study data are displayed as image demographic data in Viewer mode. The image demographic data can cover several lines.

To configure the image demographic data:

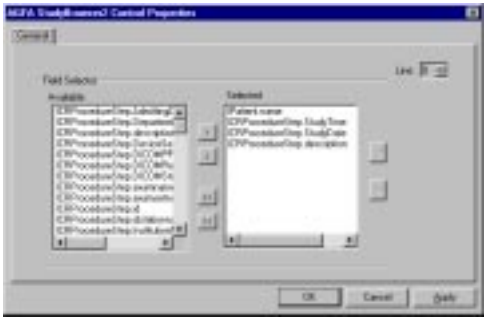
1 Make sure you are working in Viewer mode.

Refer to *'Switching between Selector mode and Viewer mode'* on page *28*.

2 Turn on the image demographic data.

Refer to *'Showing/hiding the image demographic data'* on page *91*.

3 On the Tools menu, point to Customize, and then click Customize Image Demographics.

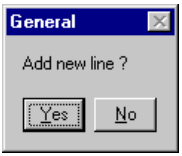


4 Click the General tab.

5 In the Line list box, click the line number of the line where you wish to display the data.

The image demographic data can cover several lines.

❖ *If you click a line number for which no items have been defined yet, the General dialog box will be displayed. To add a new line, click Yes.*



6 Move the study data which you wish to include in the selected line from the Available list to the Selected list:

To	Do one of the following
Move an item between lists	• Click the item in the Available list and click the arrow button. • Double-click the item in the Available list.

To	Do this
Move all items from one list to another	Click the double arrow button.

7 To define the order of the items in the line, click the item in the Selected list and move it up or down via the Up and Down buttons respectively.

The topmost item in the Selected list will be the first item of the line.

8 To get a preview of the image demographic data, click Apply.

The image demographic data is displayed according to the selected layout.

9 Repeat steps **5** to **8** for the other lines of the image demographic data.

10 To save the layout of the image demographic data, click OK.

Customizing the toolbars

You can customize the toolbars which are configured by default:

- Standard toolbar in Selector mode and Standard toolbar in Viewer mode.
- Format toolbar.
- Image Processing toolbar.
- Transformation toolbar.
- Annotation toolbar.

If necessary, you can easily revert to the default toolbar. You can also create custom toolbars while keeping the existing toolbars.

Customizing the default toolbars

By default the Standard toolbar contains buttons for general operations such as printing, protecting, transmitting, deleting, etc. The Format toolbar contains by default buttons for selecting a format for the image pane in Viewer mode. The Image Processing, the Transformation, and the Annotation toolbar contain by default buttons for interactive image processing, transformation, and annotation operations respectively.

However, you can customize all toolbars to suit your specific needs. Furthermore, you can configure the toolbars for Selector and Viewer mode independently. If required, you can revert to the default layout of the toolbar.

To customize one or more default toolbars:

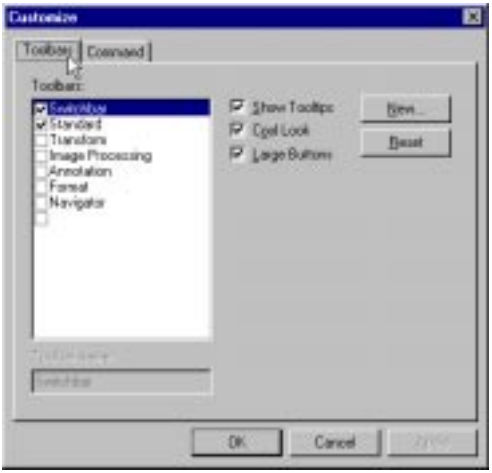
1 Make sure you are working in the appropriate mode.

Refer to *'Switching between Selector mode and Viewer mode'* on page *28*.

2 On the Tools menu, point to Customize, and then click Customize Toolbars.

The Customize dialog box is displayed.

3 Click the Toolbars tab.



4 Set the options for the toolbars in Viewer mode:

To	Do this
Enable ToolTips	Select the Show ToolTips check box.
Display the button borders	Clear the Cool Look check box.
Enable large buttons	Select the Large Buttons check box.

5 In the Toolbars list, select the check box corresponding to the toolbars which you wish to customize.

The toolbars are displayed.

6 Click the Command tab.

7 In the Categories list, click a toolbar which you wish to customize.

8 Customize the toolbar.

To	Do this
Add a button	Drag the button from the Buttons area in the Customize dialog box to the toolbar.
Remove a button	Drag the button from the toolbar to the Buttons area in the Customize dialog box.

9 To customize several toolbars, repeat steps **7** to **8**.

10 Click OK.

Reverting to the default toolbar

If you have customized the Standard toolbar in Selector mode, or the Standard, the Format, the Image Processing, the Transformation, or the Annotation toolbar in Viewer mode, you can easily revert to the default toolbar layout.

To revert to the default toolbar:

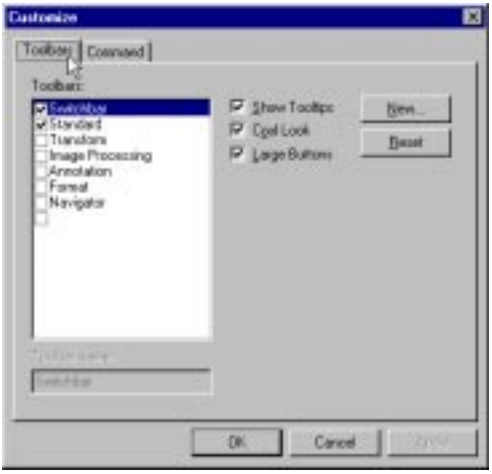
1 Make sure you are working in the appropriate mode.

Refer to *'Switching between Selector mode and Viewer mode'* on page *28*.

2 On the Tools menu, point to Customize, and then click Customize Toolbars.

The Customize dialog box is displayed.

3 Click the Toolbars tab.



4 In the Toolbars list, select the check box corresponding to the toolbar which you wish to reset.

The toolbar is displayed.

5 Click Reset.

The toolbar is reset to its default layout.

6 To reset several toolbars, repeat steps **4** to **5**.

7 Click OK.

Creating custom toolbars

You can create one or more custom toolbars and fully customize them to suit your specific needs. You can configure custom toolbars for Selector and Viewer mode independently.

To create one or more custom toolbars:

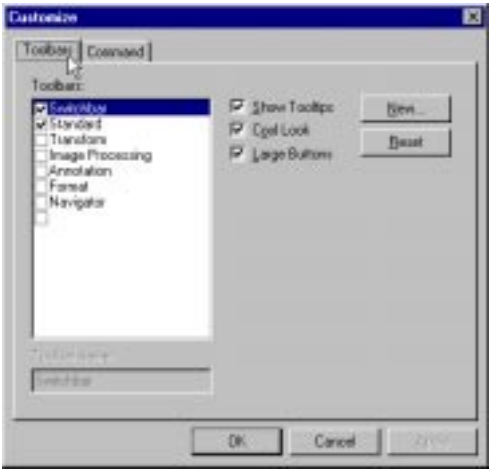
1 Make sure you are working in the appropriate mode.

Refer to *'Switching between Selector mode and Viewer mode'* on page *28*.

2 On the Tools menu, point to Customize, and then click Customize Toolbars.

The Customize dialog box is displayed.

3 Click the Toolbars tab.



4 Click New.

The New Toolbar dialog box is displayed.

5 Type the toolbar name.

6 Click OK.

The new toolbar is added to the Toolbars list and is displayed.

7 To create several custom toolbars, repeat steps **4** to **6**.

8 Customize the new toolbars.

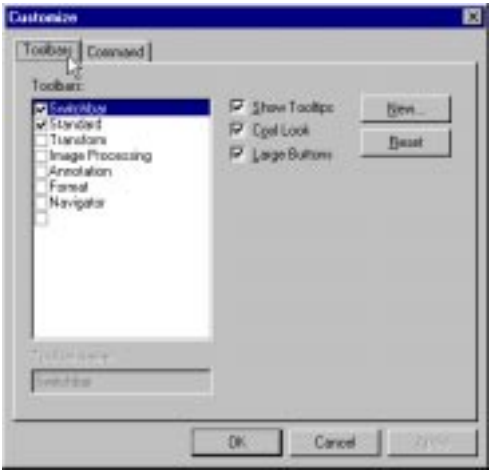
Refer to *'Customizing the default toolbars'* on page *200*.

To delete one or more custom toolbars:

1 Make sure you are working in the appropriate mode.
Refer to *'Switching between Selector mode and Viewer mode'* on page *28*.

2 On the Tools menu, point to Customize, and then click Customize Toolbars.
The Customize dialog box is displayed.

3 Click the Toolbars tab.



4 In the Toolbars list, select the check box corresponding to the toolbar which you wish to delete.
The toolbar is displayed.

5 Click Delete.
The toolbar is deleted.

6 To delete several toolbars, repeat steps **4** to **5**.

7 Click OK.

Configuring the study information

You can configure which study data are displayed in the Info dialog box.

Customizing the panes

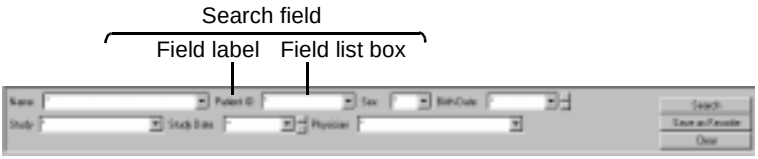
The IPD Viewer Software allows you to customize the panes to suit your specific needs. In Selector mode, you can customize:

- The search pane.
- The favorites pane.
- The list view pane.

In addition, you can resize all panes - in Selector mode and in Viewer mode - by dragging the borders.

Customizing the search pane

You can define which search fields are included in the search pane, the sequence of the search fields, the width of the field list box, the field label, and the width of the label.



To customize the search fields:

1 Make sure you are working in Selector mode.

Refer to *'Switching between Selector mode and Viewer mode'* on page *28*.

2 Do one of the following:

- On the Tools menu, click Customize Search Pane.
- Double-click the right mouse button anywhere in the search pane.

3 Click the General tab.

4 Move the study data which you wish to include in the search pane from the Available list to the Selected list:

To	Do one of the following
Move an item between lists	• Click the item in the Available list and click the arrow button. • Double-click the item in the Available list.

To	Do this
Move all items from one list to another	Click the double arrow button.

5 Customize each search field:

To	Do this
Customize the field label	**1** Click the field in the Selected list. **2** In the Label box, type the label.
Modify the label width	**1** Click the field in the Selected list. **2** In the Label Width box, type the label width in pixels. ❖ *To set the label width to fit the length of the label, type the value '-1'.*
Modify the width of the field list box	**1** Click the field in the Selected list. **2** In the Width box, type the width of the field list box in pixels.

6 To define the order of the items in the search pane, click an item in the Selected list and move it up or down via the Up and Down buttons respectively.

The topmost item in the Selected list will be the first item in the search pane.

7 To get a preview of the search pane, click Apply.

The search pane is displayed according to the selected layout.

8 To save the layout of the search pane, click OK.

Customizing the favorites pane

You can choose between large and small favorite icons and you can arrange the favorite icons according to your preferences.

Selecting the favorite icon size

You can choose between large and small favorite icons.

To modify the favorite icon size:

1. Click the right mouse button anywhere in the favorites pane.
   The shortcut menu offers you the choice between large and small icons.
2. Click the size of your choice.

Arranging favorite icons

You can modify the vertical position of the favorite icons by dragging them. You cannot arrange the icons in rows.

To arrange the favorite icons:

Drag each icon to the desired location.
If you pause over a location where you can drop the icon, the pointer changes to an insertion sign.

Customizing the list view pane

You can define which study data are displayed in the list view pane. The data in the list view pane are independent of the search fields in the search pane. This means that you can use a specific criterion for searching the database but you can decide whether or not to display this criterion in the list view pane.

To customize the columns:

1 Make sure you are working in Selector mode.

Refer to *'Switching between Selector mode and Viewer mode'* on page *28*.

2 Do one of the following:

- On the Tools menu, click Customize List View Pane.
- Double-click the right mouse button anywhere in the list view pane.

3 Click the Columns tab.

4 Move the study data which you wish to include in the list view pane from the Available list to the Selected list:

To	Do one of the following
Move an item between lists	• Click the item in the Available list and click the arrow button. • Double-click the item in the Available list.

To	Do this
Move all items from one list to another	Click the double arrow button.

Each item in the Selected list will be a column heading.

5 Customize each column:

To	Do this
Customize the column heading	**1** Click the field in the Selected list. **2** In the Label box, type the label.
Modify the column heading width	**1** Click the field in the Selected list. **2** In the Label Width box, type the column heading width in pixels.
Modify the column width	**1** Click the field in the Selected list. **2** In the Width box, type the column width in pixels.

6 To define the order of the columns in the list view pane, click an item in the Selected list and move it up or down via the Up and Down buttons respectively.

The topmost item in the Selected list will be the leftmost column in the list view pane.

7 To define the column features, click the General tab and set the following options:

To	Do this
Enable sorting the data in the list view pane	Select the Sorted check box.
Enable drag-and-drop positioning of the columns	Select the Dragable Columns check box.
Enable selection of an entire row by clicking any field in the row	Select the Row Selection check box.

8 To get a preview of the list view pane, click Apply.

The list view pane is displayed according to the selected layout.

9 To save the layout of the list view pane, click OK.

10 If you have enabled drag-and-drop positioning of the list view columns, drag the columns to the appropriate position.

11 If you have enabled sorting the data in the list view pane, click the column heading of your choice to sort the data in increasing or decreasing order.

Setting predefined texts

You can save annotation texts which you often use as predefined texts.

To define one or more predefined texts:

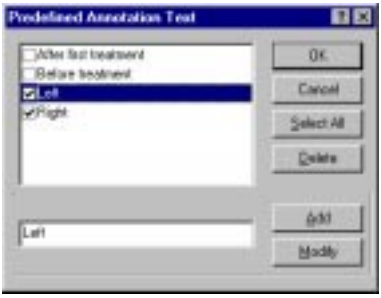
1 Make sure you are working in Viewer mode.
Refer to *'Switching between Selector mode and Viewer mode'* on page *28*.

2 On the Tools menu, click Annotation.
Alternatively, you can click the Annotation button on the Standard toolbar.

The Annotation toolbar is displayed.

3 Click the Predefined Text button.

The Predefined Annotation Text dialog box is displayed.



4 Set the predefined texts:

To	Do this
Add a predefined text	**1** Type the text in the box. **2** Click Add.
Modify a predefined text	**1** Click the text in the list. **2** Edit the text in the box. **3** Click Modify.
Delete a predefined text	**1** Click the text in the list. **2** Click Delete.

5 Select the check boxes of the predefined texts which must be available in the list box of the Annotation toolbar.

Click OK.

Appendix A

Glossary

Glossary

Term	Explanation
Annotation toolbar	Toolbar with buttons for adding annotations (lines, arrows, geometric forms, texts, etc.) to images, to perform angle and distance measurements, and to perform scan average level (SAL) and density profile calculations.
Annotations	Markers which you can add to an image. Example: lines, arrows, geometric forms, distance markers, text, etc.
Density profile	Density, i.e. the square root of the exposure, along a line integrated over a rectangular area.
DICOM	Digital Imaging and Communication in Medicine.
Favorite	Set of search criteria which you have saved for future use.
Format toolbar	Toolbar for customizing the image pane. You can either view one, two, four or nine images at a time.
Image demographic data	Patient data displayed below the image(s) in the image pane
Image pane	Pane containing the image(s) under examination.
Image Processing toolbar	Toolbar with buttons for accessing the interactive image processing functions: MUSICA processing, global contrast and intensity adjustment, collimation, etc.

Interactive image processing	Interactively modifying images. Examples: changing the contrast and intensity, manually collimating an image, etc.
List view pane	Pane giving an overview of the studies which you have retrieved via the search pane.
Local database	Database stored on the hard disk of your ADC QS Station.
Multiple image mode	Mode in which several images are displayed in the image pane.
Nearline storage device	Device for archiving studies. Here: Digital Linear Tape (DLT).
Remote database	Database stored on a remote volume.
Rislink file	ASCII file containing the study or image data.
Search pane	Pane containing a number of search criteria for retrieving studies from the local database.
Single image mode	Mode in which one image is displayed in the image pane.
Study	Images of a medical examination.
Thumbnail pane	Pane showing the thumbnail images of studies.
Thumbnail demographic data	Patient data displayed below the thumbnail images.
Transformation	Operations such as rotating, flipping, zooming in/out, magnifying, etc.
Transformation toolbar	Toolbar for accessing functions for image transformation: rotation, flipping, zooming in/out, etc.

Appendix B

Index

A

adjusting
- detail contrast ... 116
- detail intensity ... 116
- global contrast ... 110
- global intensity ... 110
- window/level ... 110

advanced MUSICA processing ... 116

angles
- measuring ... 150
- modifying labels ... 164
- modifying measurements ... 164

Annotation toolbar ... 16

annotations ... 139
- adding ... 139
- arrows ... 158
- deleting ... 166
- editing ... 164
- ellipses ... 160
- lines ... 156
- moving ... 164
- polygons ... 160
- rectangles ... 160
- showing/hiding ... 141
- text ... 162

archiving
- images ... 64
- manually ... 62
- studies
  - in Selector mode ... 64
  - in Viewer mode ... 179

arrows
- adding ... 158
- editing ... 164

automatic collimation ... 122

automatic selection ... 37

B

basic MUSICA processing 114
black borders 127
browsing through images 100
burn 112

C

calculating
density profile 154
scan average level (SAL) 152
calibration
circular 148
linear 146
modifying 164
centering images 136
changing
detail contrast 116
detail intensity 116
global contrast 110
global intensity 110
window/level 110
checking image quality 21
circular calibration 148
collimation 122
automatic 122
borders 127
manual 122
turning on/off 126
combining studies 53
comparing images 89
configuring
image demographic data 196
study information 206
thumbnail demographic data 194
consulting
study information
in Selector mode 57
in Viewer mode 169
contrast
adjusting globally 110
fine-tuning 116
numeric values 108
saturation 112

custom layouts
printing on
in Selector mode 60
in Viewer mode 175
customizing
favorites pane 210
list view pane 211
search pane 207
toolbars 198

D

databases
local 36
remote 46
default layouts
printing on
in Selector mode 59
in Viewer mode 174
default printer
printing on
in Selector mode 59
in Viewer mode 174
deleting
annotations 166
favorites 41
groups 45
images
in Selector mode 56
in Viewer mode 168
studies 56
demographic data
configuring 194, 196
showing/hiding
in Selector mode 32
in Viewer mode 86, 87
density profile 154
diagnosis, on-screen 83
DICOM station
out of service 63, 178
transmitting to 62
dictated
marking as
in Selector mode 58
in Viewer mode 171

displaying
gray scale distribution 108
histogram 108
sensitometric curve 108
distances
measuring 144
modifying labels 164
modifying measurements 164
dose monitoring bar 88
drawing
arrows 158
ellipses 160
lines 156
polygons 160
rectangles 160

E

editing
annotations 164
images 106, 131, 139
ellipses
adding 160
editing 164
exporting
image data
in Selector mode 78
in Viewer mode 191
images 187
studies
in Selector mode 71
in Viewer mode 187
with custom name 75
with default name 72
study data 78
exposure dose 88
extracting
regions of interest (ROI) 130

F

favorites 38
creating groups 43
deleting 41
deleting groups 45
example 38
renaming 40
renaming groups 44
saving 38
selecting groups 43
favorites pane
customizing 210
definition 12
showing/hiding 29
flipping images 133
format for image pane 89
Format toolbar
definition 16
showing/hiding 89
full screen mode 91

G

geometric forms
adding 160
editing 164
gray scale distribution 108
grid lines 142
grouping thumbnails 33
groups of favorites 42
creating 43
deleting 45
example 42
renaming 44
selecting 43

H

histogram 108

I

ID Software
switching to 20
identifying studies 20
image data
exporting
in Selector mode 78
in Viewer mode 191
image demographic data
configuring 196
showing/hiding 87
image pane 17
Image Processing toolbar 16
image quality 21
images
archiving 64
centering 136
changing order 55
comparing 89
deleting
in Selector mode 56
in Viewer mode 168
exporting 187
flipping 133
printing 59
processing 106
rearranging 55
roaming 135
rotating 132
saving
on disk 173
on portable media 187
selecting 50
transforming 131
transmitting 62
zooming in/out 134
importing
studies
in Selector mode 65
in Viewer mode 180

intensity
adjusting globally ... 110
fine-tuning ... 116
numeric values ... 108
saturation ... 112
interactive image processing ... 116
inverting images ... 120

L

licences ... 8
linear calibration ... 146
lines
adding ... 156
editing ... 164
list view pane
customizing ... 211
definition ... 12
showing/hiding ... 30
local database
searching ... 36

M

magnifying ... 138
manual collimation ... 122
manual selection ... 48
manually archiving ... 62
marking as dictated
in Selector mode ... 58
in Viewer mode ... 171
measuring
angles ... 150
distances ... 144
merging studies ... 53
mirroring images ... 133
modes
Selector mode ... 10
Viewer mode ... 10

modifying
angle labels ... 164
angle measurements ... 164
calibration distances ... 164
calibration labels ... 164
distance labels ... 164
distance measurements ... 164
regions of interest (ROI) ... 164
study information
in Selector mode ... 57
in Viewer mode ... 169
moving
annotations ... 164
MUSICA processing
advanced ... 116
basic ... 116

N

navigating in Viewer mode ... 92
through favorite studies ... 103
through images of a study ... 95
through retrieved studies ... 101
through selected studies ... 95
navigation bar
definition ... 14
showing/hiding ... 93
nearline storage devices ... 64, 179
noise reduction ... 116
non-default layouts
printing on
in Selector mode ... 60
in Viewer mode ... 175

O

order
changing ... 55
out of service
printers ... 63, 178
overexposure
saturation ... 121

P

panes
- in Selector mode ... 12
- in Viewer mode ... 17

parameters
- MUSICA ... 116
- study ... 114

polygons
- adding ... 160
- editing ... 164

portable media
- exporting to
  - in Selector mode ... 71
  - in Viewer mode ... 187
- importing from
  - in Selector mode ... 65
  - in Viewer mode ... 180

predefined texts ... 214

Print Composer
- in Selector mode ... 60
- in Viewer mode ... 175

print jobs
- re-routing
  - in Selector mode ... 63
  - in Viewer mode ... 178

printers
- out of service ... 63, 178

printing
- images ... 59
- on custom layouts
  - in Selector mode ... 60
  - in Viewer mode ... 175
- on default layout
  - in Selector mode ... 59
  - in Viewer mode ... 174
- on default printer
  - in Selector mode ... 59
  - in Viewer mode ... 174
- on non-default layouts
  - in Selector mode ... 60
  - in Viewer mode ... 175
- studies
  - in Selector mode ... 59
  - in Viewer mode ... 174

prior studies
showing/hiding
in Selector mode ... 34
in Viewer mode ... 94
processing
images ... 106
interactive ... 116
study type related ... 114
protecting studies
in Selector mode ... 51
in Viewer mode ... 105

Q

QC Software
switching to ... 21
queries
saving ... 38
Quick Print
in Selector mode ... 59
in Viewer mode ... 174
quitting IPD Viewer Software ... 24

R

rearranging images ... 55
recalculating
scan average level (SAL) ... 164
rectangles
adding ... 160
editing ... 164
regions of interest (ROI)
extracting ... 130
modifying ... 164
scan average level (SAL) ... 152
shutters ... 128
remote databases
searching ... 46
removing protection
in Selector mode ... 52
in Viewer mode ... 105
renaming
favorites ... 40
groups ... 44

report
electronic ... 170
marking as dictated
in Selector mode ... 58
in Viewer mode ... 171
re-routing
print jobs
in Selector mode ... 63
in Viewer mode ... 178
transmit jobs
in Selector mode ... 63
in Viewer mode ... 178
resizing annotations ... 164
retrieving
studies ... 179
reverting to original image
after calibration ... 149
after contrast and intensity adjustment ... 113
after manual collimation ... 125
after zooming or roaming ... 137
Rislink file
saving as
in Selector mode ... 78
in Viewer mode ... 191
roaming over an image ... 135
ROIs
extracting ... 130
modifying ... 164
scan average level (SAL) ... 152
shutters ... 128
rotating images ... 132

S

saturation
due to contrast and intensity adjustment ... 112
due to overexposure ... 121

saving
as Rislink file
in Selector mode ... 78
in Viewer mode ... 191
favorite searches ... 38
image data
in Selector mode ... 78
in Viewer mode ... 191
images
on disk ... 173
on portable media ... 187
searches ... 38
studies on portable media
in Selector mode ... 71
in Viewer mode ... 187
study data ... 78
scan average level (SAL)
calculating ... 152
recalculating after resizing region of interest ... 164
search criteria ... 36
search pane
customizing ... 207
definition ... 12
showing/hiding ... 28
searches
saving ... 38
searching
in local database ... 36
in remote databases ... 46
selecting
images ... 50
studies ... 48
automatically ... 37, 48
manually ... 48

Selector mode
archiving 64
deleting 56
exporting
image data 78
studies 71
study data 78
hiding
thumbnail demographic data 32
thumbnails 31
importing studies 65
printing 59
protecting studies 51
re-routing 63
saving 78
showing
thumbnail demographic data 32
thumbnails 31
switching to 23
transmitting 62
sensitometric curve 108
shortcut pane 12
shutters 128
splitting a study 54
Standard toolbar
in Selector mode 11
in Viewer mode 16

studies
archiving
in Selector mode 64
in Viewer mode 179
combining 53
deleting 56
exporting
in Selector mode 71
in Viewer mode 187
identifying 20
importing
in Selector mode 65
in Viewer mode 180
merging 53
printing
in Selector mode 59
in Viewer mode 174
protecting
in Selector mode 51
in Viewer mode 105
retrieving 179
saving on portable media
in Selector mode 71
in Viewer mode 187
searching 36
in local database 36
in remote databases 46
selecting 48
splitting 54
transmitting
in Selector mode 62
in Viewer mode 177
study data
exporting 78
study information
configuring 206
consulting
in Selector mode 57
in Viewer mode 169
modifying
in Selector mode 57
in Viewer mode 169
study overview pane
definition 17
showing/hiding 86

study report
electronic 170
marking as dictated
in Selector mode 58
in Viewer mode 171
study summary 172
Switch toolbar
in Selector mode 11
in Viewer mode 16
switching
between patients 99
between Selector mode and Viewer mode 22
between studies of a patient 97
to ID Software 20
to QC Software 21

T

text
adding 162
editing 164
setting predefined texts 214
thumbnail demographic data
configuring 194
showing/hiding
in Selector mode 32
in Viewer mode 86
thumbnail pane
definition 12
showing/hiding 31
thumbnails
grouping 33
showing/hiding
in Selector mode 31
in Viewer mode 86
toolbars
creating custom toolbars 203
customizing default toolbars 198
in Selector mode 11
in Viewer mode 16
reverting to default 201
Transformation toolbar 16
transforming images 131
transmit jobs
re-routing
in Selector mode 63
in Viewer mode 178

transmitting
images 62
studies
in Selector mode 62
in Viewer mode 177

U

user interface
Selector mode 11
Viewer mode 14

V

Viewer mode
archiving studies 179
browsing 100
deleting
images 168
exporting
image data 191
images 187
studies 187
hiding
image demographic data 87
thumbnail demographic data 86
thumbnails 86
importing studies 180
navigating 92
through favorite studies 103
through images of a study 95
through retrieved studies 101
through selected studies 95
printing studies 174
protecting studies 105
re-routing 178
retrieving studies 179
saving image data 191
showing
image demographic data 87
thumbnail demographic data 86
thumbnails 86
switching to 22
transmitting studies 177

W

window/level
changing 110
numeric values 108
worklist 15

Z

zooming in/out on an image 134

CE

Printed in Belgium
Published by Agfa-Gevaert N.V., B-2640 Mortsel-Belgium
2254A GB 20000821

AGFA